

This document was too large to scan as a whole document, therefore it required breaking into smaller sections.

Document number: SD-WM-DP-184

Section 4 of 4

Title: Final Report for Tank 241U107
Push Mode Cores 129 & 134 & 135

Date: 07/26/1996 **Revision:** R001

Originator: Taiduk J
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References: ECN-63331

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TRADEMARKS:

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NARRATIVE

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45-Day Safety Screening Results for Tank 241-U-107, Push Mode
Cores 129, 134, and 135

SUMMARY

This is the 45-day safety screening report for rotary mode core samples taken from risers 9, 7, and 2 of tank 241-U-107 (U-107) from February 6, 1996 through March 28, 1996. The samples were received at the 222-S Laboratories from February 9, 1995 through April 2, 1996, and are undergoing analyses consistent with the safety screening data quality objective (DQO) (Dukelow et al. 1995), the organic safety program DQO (Turner et al. 1995), the historical DQO (Simpson and McCain 1995), and the compatibility DQO (Fowler 1995). All subsegments from the three cores obtained are being analyzed for those tests identified in the sampling and analysis plan (Raphael 1996), except in circumstances where insufficient material prevented the analysis. This interim report, however, only summarizes the results of the primary safety screening analyses: differential scanning calorimetry (DSC), thermogravimetric analysis (TGA), total alpha analysis, and density/specific gravity analyses. The remaining analyses shall be discussed in the final report for this project. In addition to the analytical requirements of above references, a test for flammable gas concentration was requested; the data from these measurements obtained by the field operations crews are also provided.

None of the data indicate that the tank is "unsafe" when compared to the criteria in the Safety Screening Data Quality Objective (Dukelow et al. 1995) with the exception of the energetic results for two samples (liquid samples). However, there is a high moisture content of greater than 45% in the liquid portion of the tank. The one-sided 95-percent confidence interval for total alpha results are well below the notification limit. Furthermore, the vapor in the tank U-107 dome space is far below the 25% lower flammability limit (LFL) stated in the SAP. Therefore, the results show that this tank may be considered "conditionally" safe.

Water solution with a lithium bromide tracer was used to soften the sample when the sampling crew encountered hard surfaces. However, no water solution blank was taken. If needed, the water solution blank data from the tank 241-U-109 sampling event may be used. Bromide analysis by ion chromatography (IC) and lithium analysis by inductively coupled plasma atomic emission spectroscopy (ICP) are being performed to determine the extent of water contamination in the samples. These results will be summarized in the final report for this analysis event.

SCOPE

This document serves as the 45-day report deliverable for the tank 241-U-107 core samples collected between February 6 and March 28, 1996. Each sample was received, extruded, and analyzed by the 222-S Laboratory in accordance with the SAP (Raphael 1996).

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This report includes the primary safety screening results (tank headspace flammability, DSC, TGA, total alpha, and bulk density or specific gravity) and copies of all DSC and TGA raw data scans as requested per the SAP. Photographs of the extruded segments were taken and, although not included in this report, are available.

SAMPLE RECEIPT AND EXTRUSION

Eight segments per core were expected to be taken from this tank. Segment 1 was expected to be 26 cm (10 inches) in depth and 2 through 8 segments expected to be 48 cm (19 inches) in depth. However, the sampling crew encountered very hard surface at different levels for each core and the waste could not be further penetrated. Therefore, the three cores were only 3, 6, and 2 segments in length.

Information on the receipt and extrusion of the core samples, including sampling date, sample receipt date, extrusion date, amount of sample, and sample description, is provided in Table 1. No separable organic liquid was observed in any of the segments, and no field blank was delivered to the 222-S Laboratory with this sampling event.

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Table 1. Sample Receipt and Extrusion for Tank 241-U-107 Core Samples

Sample	Date Sampled	Date Received at Lab	Date Extruded	Sample Recovered	Sample Description
Core 129, Segment 1	02/06/96	02/09/96	02/13/96	Drainable Liquid: Lower Half Solid:	266.8 g 3.5 g The drainable liquid was clear light yellow/green in color. Estimated volume of the sample collected was 210 mL. Extruded approximately 0.5 inches of crystalline saltcake. The solids were light yellow in color. Solids were put into one jar.
Core 129, Segment 1R	02/09/96	02/09/96	02/13/96	None	N/A
Core 129, Segment 2	02/06/96	02/09/96	02/13/96	Drainable Liquid: Upper Half Solid: Lower Half Solid:	273.5 g 75.1 g 37.2 g Extruded approximately 3 inches of solids. Solids were dark brown to black in color and texture resembled a wet saltcake. Solids were subsampled in half segments. Collected approximately 225 mL of drainable liquid. The liquid was dark brown in color and opaque.
Core 129, Segment 2R	02/09/96	02/09/96	02/13/96	None	N/A
Core 129, Segment 3	02/07/96	02/09/96	02/13/96	Upper Half Solid: Lower Half Solid:	194.9 g 179.1 g Extruded approximately 15 inches of solids. Solids were light brown gray in color and the texture resembled a wet saltcake. Solids were subsampled in half segments.
Core 129, Segment 3R	02/09/96	02/15/96	02/20/96	Upper Half Solid:	163.2 g Extruded approximately 7 inches of solids. Solids were medium gray in color and the texture resembled a crystalline saltcake. No drainable liquid.

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Sample	Date Sampled	Date Received at Lab	Date Extruded	Sample Recovered	Sample Description
Core 134, Segment 1	02/16/96	02/20/96	02/23/96	None	N/A
Core 134, Segment 2	02/16/96	02/20/96	02/23/96	Upper Half Solid: 249.2 g	Extruded approximately 12 inches of solids. Solids were white/grey in color and the texture resembled a dry saltcake. Solids were subsampled in one jar.
Core 134, Segment 3	02/16/96	02/20/96	02/27/96	Upper Half Solid: 143.9 g	Extruded approximately 6.5 inches of solids. Solids were medium gray in color and the texture resembled a saltcake.
Core 134, Segment 4	02/16/96	02/20/96	02/27/96	Lower Half Solid: Quarter Segment B: 184.4 g Quarter Segment A: 92.8 g 81.8 g	Extruded approximately 17.5 inches of solids. Facies was present, the lower section was black sludge and the upper section was dark gray saltcake. The solids were subsampled in quarter segments.
Core 134, Segment 5	02/16/96	02/20/96	02/27/96	Quarter Segment B: Quarter Segment A: 49.7 g 59.8 g	Extruded approximately 5 inches of solids. Solids were gray saltcake (lower section) and black sludge (upper section). Solids contained facies.
Core 134, Segment 5A	02/20/96	02/20/96	02/27/96	Quarter Segment A: Liner Liquid: 19.4 g 32.8 g	Extruded approximately 1 inch of solids. Solids were gray in color with some brown tint. The texture resembled a saltcake.
Core 134, Segment 5B	02/21/96	02/23/96	02/27/96	Drainable Liquid: 106.3 g	Collected approximately 70 mL of drainable liquid. The liquid was dark brown in color and opaque. No solids extruded other than those suspended in drainable liquid.
Core 134, Segment 6	02/21/96	02/23/96	02/27/96	None	N/A
Core 134, Segment 6A	02/26/96	02/27/96	03/01/96	Whole Segment: Drainable liquid: 29.3 g 89.6 g Liner Liquid: 16.8 g	Extruded approximately 6 inches of solids. Solids were light brown in color and texture resembled a wet saltcake. Collected approximately 70 mL of drainable liquid. The liquid was light brown in color and opaque.

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Sample	Date Sampled	Date Received at Lab	Date Extruded	Sample Recovered	Sample Description
Core 135, Segment 1	03/20/96	04/01/96	04/15/96	Upper Half Solid: Drainable Liquid: 1.4 g 94.1 g	Extruded approximately 1/2 inch of solids. Solids were dark brown in color and the texture resembled a wet sludge. The solids were subsampled in one jar. Collected approximately 50 mL of drainable liquid. The liquid was dark brown in color and opaque.
Core 135, Segment 1R	03/26/96	04/01/96	04/16/96	Whole segment: Drainable liquid: 4.0 g 342.6 g	Extruded approximately less than 0.25 inch of solids. Solids were yellow in color and a crystalline saltcake. Collected approximately 250 mL of drainable liquid. The liquid was yellow in color and clear.
Core 135, Segment 2	03/20/96	04/01/96	04/08/96	Upper Half Solid: Liner Liquid: 2.6 g 30.1 g	Extruded approximately 1/4 inch of solids. The solids were dark black in color and the texture resembled a wet saltcake.
Core 135, Segment 2A	03/22/96	04/01/96	04/16/96	Whole Segment: Drainable Liquid: 58.7 g 41.5 g	Extruded approximately 1 inch of solids. Solids were light brown in color and the texture resembled a saltcake. Collected approximately 25 mL of drainable liquid. The liquid was yellowish brown in color and opaque.
Core 135, Segment 2R	03/28/96	04/02/96	04/08/96	Upper Half Solid: Lower Half Solid: 111.0 g 116.6 g	Extruded approximately 10 inches of solids. Solids were light gray in color and the texture resembled a saltcake. No drainable liquid.

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TANK HEADSPACE FLAMMABILITY

Prior to core sampling, the flammability of the tank headspace was measured to address the vapor flammability issue of the safety screening data quality objective (Dukelow et al. 1995). The tank vapor space was sampled periodically from February 6 through February 21, 1996 to determine the flammability of the vapor space gasses. Sampling was done through risers 7 and 9 in the dome space. The average combustible gas meter readings were between 0 to 4 percent of the LFL (attachment), indicating no flammability concerns with this tank.

ANALYTICAL RESULTS

Analytical results appear in the Sample Data Summary and a discussion of the results is presented below. Any deviations from the requirements of the SAP are noted in the following sections.

Thermogravimetric Analysis (TGA) Moisture

The weight percent water by TGA was performed under a nitrogen purge using either procedure LA-560-112, Rev B-1 on a Mettler TG 50 instrument or procedure LA-514-114, Rev. C-1 on a Perkin Elmer TGA 7 instrument.

Results ranged from 0.73 to 49.9 weight percent water for the solids. Drainable liquids ranged from 47.0 to 92.2 weight percent water. Three liner liquid sample were analyzed and the results ranged from 89.1 to 98.2 weight percent water. The weight percent water for sample S96T001070 (Core 134, Segment 6A) was 92%. The probable cause for the high water content in this sample is due to the contamination by the water solution.

All standards run with the samples had recoveries which fell within the required range of 90 to 110 percent. Ten subsegments had RPD values that exceeded the desired 10 percent criterion. No reruns were requested due to the heterogeneity of the samples.

Differential Scanning Calorimetry (DSC)

Differential scanning calorimetry analyses under a nitrogen purge were performed using either procedure LA-514-113, Rev. C-1 on a Mettler DSC 20 instrument or procedure LA-514-114, Rev. C-1 on a Perkin Elmer DSC 7 instrument. It should be noted that the DSC scans from these two instruments show exotherms differently; exotherms on the Perkin Elmer are shown as downward peaks while the Mettler shows them as upward peaks. Using the average percent water by TGA for each sample, dry weight basis results were calculated from the wet weight basis results. Both wet and dry results are given in the Sample Data Summary.

Sixteen out of twenty-eight of the waste samples showed no exotherm. Two of the twelve samples which had observable energetics had DSC exotherms that exceeded the action limit of 480 joules/g (dry weight basis) stated in the SAP (Raphael 1996) and the Safety Screening Data Quality Objective (Dukelow et al. 1995). Appropriate notifications of a limit violation were made.

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For the two samples with DSC results above 480 joules/g, the upper limit of a one-sided 95% Confidence Interval were calculated (see attachment). The upper limit of the 95% Confidence Intervals were 674.0 to 678.0 joules/g (dry weight basis). For the other ten samples with DSC results above 0 joules/g, the upper limit of a one-sided 95% Confidence Intervals ranged from 16.6 to 467.8 joules/g (dry weight basis).

Standards run with the samples had recoveries which fell within the required range of 90 to 110 percent for all but two of the samples (112.5 and 113.9 percent). RPDs between the sample and duplicate sample analyses were below 10 percent for all but five of the samples. The RPDs for these five samples were ranged from 15.7 to 150 percent. No reruns were requested due to the heterogeneity of the samples.

Total Alpha

The total alpha analyses were performed using procedure LA-508-101, Rev. D-2. Solid samples were prepared by fusion prior to the total alpha analysis; the fusion was performed using procedure LA-549-141, Rev. D-0.

Individual sample and duplicate results ranged from 0.00243 $\mu\text{Ci}/\text{g}$ to 0.91 $\mu\text{Ci}/\text{g}$ in the solids. In the drainable liquid, the results ranged from less than values from <2.25E-03 to <1.72E-03 $\mu\text{Ci}/\text{mL}$ with only one value reported that was not a less than value (5.36E-03 $\mu\text{Ci}/\text{mL}$). The low sample activities and high dissolved solids in the samples resulted in high RPDs and low spike recoveries for the tank U-107 samples. Six samples have spike recoveries out of range (from 66.0 to 87.2 percent) and 9 RPDs were above the 10 percent criterion with RPDs ranging from 11.3 to 56.1 percent. Thirteen standard recoveries were out of limits with values ranging from 110.9 to 119.5 percent.

The one-sided 95-percent upper confidence interval limit was calculated for samples where the total alpha results were above the detection limit. Results are presented in the attachment. The upper confidence intervals ranged from 2.40E-03 $\mu\text{Ci}/\text{mL}$ to 1.65E-02 $\mu\text{Ci}/\text{mL}$ for liquid samples and 3.20E-03 $\mu\text{Ci}/\text{g}$ to 1.71 $\mu\text{Ci}/\text{g}$ for solids. All of these results are well below the notification limit of 34.9 $\mu\text{Ci}/\text{g}$; therefore, no reruns were requested.

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Bulk Density and Specific Gravity

Bulk density measurements were performed on the solid samples using procedure LO-160-103, Rev. A-7, and specific gravity measurements were performed on the liquid samples using procedure LA-510-112, Rev. C-3.

Bulk densities of the solids ranged from 1.30 to 1.76 g/mL. Bulk density for sample S96T001046 (Core 134, Segment 6A) was 1.1 g/mL. The probable cause for low density is due to the water solution contamination. A density of 1.5 g/mL is assumed in converting the total alpha notification limit from g/L of plutonium to $\mu\text{Ci/g}$. A value below 1.5 is conservative; therefore, the total alpha notification should be adjusted to 34.9 $\mu\text{Ci/g}$ (from density of 1.76 g/mL). The specific gravities of the liquids ranged from 1.38 to 1.67 g/mL. The standard recoveries for the specific gravity and density measurements were between 97.7 and 99.6 percent.

Project Coordinator: Jaiduk Jo

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- Dukelow, G. T., J. W. Hunt, H. Babad, and J. E. Meacham, 1995, *Tank Safety Screening Data Quality Objective*, WHC-SD-WM-SP-004, Rev. 2, Westinghouse Hanford Company, Richland, Washington.
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- Raphael, G. F., 1996, *Tank 241-U-107 Push Mode Core Sampling and Analysis Plan*, WHC-SD-WM-TSAP-076, Rev. 0, Westinghouse Hanford Company, Richland, Washington.
- Simpson, B. C., and D. J. McCain, 1995, *Historical Model Evaluation Data Requirements*, WHC-SD-WM-DQO-018, Rev. 0A, Westinghouse Hanford Company, Richland, Washington.
- Turner, D. A., H. Babad, L. L. Buckley, and J. E. Meacham, 1995, *Data Quality Objective to Support Resolution of the Organic Complexant Safety Issue*, WHC-SD-WM-DQO-006, Rev. 2, Westinghouse Hanford Company, Richland, Washington.

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SAMPLE DATA SUMMARY

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INTERIM
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CORE NUMBER: 129
SEGMENT #: 3R

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%	
					Lower	Upper									
S96T001140			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.360	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T001143			% Water by TGA on Perkin Elmer	%	None	None	99.41	n/a	4.960	6.360e0	5.660e0	24.7	n/a	n/a	n/a
S96T001143			DSC Exotherm on Perkin Elmer	Joules/g	None	None	92.86	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T001143			DSC Exotherm Dry Calculated	Joules/g Dry	-7.0e+00	486.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T001153			Alpha of Digested Solid	uCi/g	-7.0e+00	41.00	98.44	<1.450e-3	4.64e-02	3.220e-2	3.930e-2	36.1	73.82	4.000e-3	1.75E+01

=> Limit violated

=> Selected Limit

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INTERIM

U-107 Safety Screening Report
U-107

CORE NUMBER: 129
SEGMENT #: 1

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits			Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper	Standard %								
S96T000683			% Water by TGA using Mettler	%	None	None	102.3	n/a	18.52	1.937e1	1.895e1	4.49	n/a	n/a	n/a
S96T000683			DSC Exotherm Dry Calculated	Joules/g Dry	-7.0e+00	480.0	n/a	n/a	15.30	1.407e1	1.469e1	8.38	n/a	n/a	n/a
S96T000683			DSC Exotherm using Mettler	Joules/g	None	None	108.6	n/a	12.40	1.140e1	1.190e1	8.40	n/a	n/a	n/a
S96T000684	F		Alpha of Digested Solid	uCi/g	-7.0e+00	41.00	104.6	2.00e-03	2.43e-03	<5.12E-3	n/a	n/a	92.60	4.000e-3	1.06E+02

Drainable Liquid: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits			Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper	Standard %								
S96T000637			Specific Gravity	Sp.G.	None	None	98.24	n/a	1.381	n/a	n/a	n/a	n/a	1.000e-3	n/a
S96T000665			% Water by TGA using Mettler	%	None	None	99.61	n/a	51.94	5.451e1	5.322e1	4.83	n/a	n/a	n/a
S96T000665			DSC Exotherm Dry Calculated	Joules/g Dry	-7.0e+00	480.0	n/a	n/a	1.17e+02	1.148e2	1.160e2	2.07	n/a	n/a	n/a
S96T000665			DSC Exotherm using Mettler	Joules/g	None	None	105.8	n/a	54.80	5.370e1	5.425e1	2.03	n/a	n/a	n/a
S96T000665			Alpha in Liquid Samples	uCi/mL	-7.0e+00	61.50	98.04	<1.210e-2	<1.72e-02	<1.72E-2	n/a	n/a	95.41	2.500e-2	5.00E+02

=> Limit violated
=> Selected Limit

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INTERIMU-107 Safety Screening Report
U-107CORE NUMBER: 129
SEGMENT #: 2

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits			Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper	Standard %								
S96T000642			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.520	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000644			% Water by TGA using Mettler	%	None	None	100.2	n/a	48.57	4.734e1	4.795e1	2.56	n/a	n/a	n/a
S96T000644			DSC Exotherm Dry Calculated	Joules/g Dry	-7.0e+00	480.0	n/a	n/a	2.71e+02	2.538e2	2.626e2	6.67	n/a	n/a	n/a
S96T000644			DSC Exotherm using Mettler	Joules/g	None	None	105.4	n/a	1.41e+02	1.321e2	1.366e2	6.66	n/a	n/a	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits			Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper	Standard %								
S96T000645			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.5	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000647			% Water by TGA using Mettler	%	None	None	100.2	n/a	21.10	1.826e1	1.968e1	14.4	n/a	n/a	n/a
S96T000647			DSC Exotherm Dry Calculated	Joules/g Dry	-7.0e+00	480.0	n/a	n/a	11.95	1.021e1	1.108e1	15.7	n/a	n/a	n/a
S96T000647			DSC Exotherm using Mettler	Joules/g	None	None	105.4	n/a	9.600	8.200e0	8.900e0	15.7	n/a	n/a	n/a
S96T000687	F		Alpha of Digested Solid	uCi/g	-7.0e+00	41.00	104.6	2.00e-03	1.54e-01	1.700e-1	1.620e-1	9.88	n/a	4.000e-3	1.01E+01

Drainable Liquid: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits			Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper	Standard %								
S96T000641			Specific Gravity	Sp.G.	None	None	98.24	n/a	1.435	n/a	n/a	n/a	n/a	1.000e-3	n/a
S96T000682			% Water by TGA using Mettler	%	None	None	99.61	n/a	49.79	4.955e1	4.967e1	0.48	n/a	n/a	n/a
S96T000682			DSC Exotherm Dry Calculated	Joules/g Dry	-7.0e+00	480.0	n/a	n/a	1.30e+02	1.266e2	1.281e2	2.42	n/a	n/a	n/a
S96T000682			DSC Exotherm using Mettler	Joules/g	None	None	105.8	n/a	65.30	6.370e1	6.450e1	2.48	n/a	n/a	n/a
S96T000682			Alpha in Liquid Samples	uCi/ml	-7.0e+00	61.50	98.04	<1.210e-2	<1.09e-02	<1.09e-2	n/a	n/a	n/a	2.500e-2	5.00E+02
S96T000685			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.400	n/a	n/a	n/a	n/a	5.000e-1	n/a

=> Limit violated
=> Selected Limit

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INTERIM

U-107 Safety Screening Report
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CORE NUMBER: 129
SEGMENT #: 3

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000648			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.480	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000650			% Water by TGA using Mettler	%	None	None	102.1	n/a	22.19	2.684e1	2.452e1	19.0	n/a	n/a	n/a
S96T000650			DSC Exotherm Dry Calculated	Joules/g Dry	-7.0e+00	480.0	n/a	n/a	33.78	1.418e1	2.398e1	81.7	n/a	n/a	n/a
S96T000650			DSC Exotherm using Mettler	Joules/g	None	None	106.2	n/a	25.50	1.070e1	1.810e1	81.8	n/a	n/a	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000651			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.460	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000653			% Water by TGA using Mettler	%	None	None	102.1	n/a	16.78	1.743e1	1.711e1	3.80	n/a	n/a	n/a
S96T000653			DSC Exotherm Dry Calculated	Joules/g Dry	-7.0e+00	480.0	n/a	n/a	16.77	3.619e1	2.648e1	73.3	n/a	n/a	n/a
S96T000653			DSC Exotherm using Mettler	Joules/g	None	None	106.2	n/a	13.90	3.000e1	2.195e1	73.3	n/a	n/a	n/a
S96T000689	F		Alpha of Digested Solid	uCi/g	-7.0e+00	41.00	95.42	5.230e-3	3.36e-02	3.710e-2	3.530e-2	9.90	85.46	6.000e-3	2.36E+01

=> Limit violated
=> Selected Limit

2-21

WHC-SD-WM-DP-184, REV. 0

WHC-SD-WM-DP-184, REV. I

INTERIM

U-107 Safety Screening Report
U-107

CORE NUMBER: 134
SEGMENT #: 5A

SEGMENT PORTION: Liner Liquid

Sample#	R	A#	Analyte	Unit	Action Limits			Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper	Standard %								
S96T001110			Alpha in Liquid Samples	uCi/mL	-7.0e+00	61.30	112.5	<4.450e-5	<6.30e-05	<4.54E-5	n/a	n/a	98.05	1.090e-4	5.00E+02
S96T002034			% Water by TGA using Mettler	%	None	None	100.1	n/a	98.17	9.814e1	9.816e1	0.03	n/a	n/a	n/a
S96T002034			DSC Exotherm Dry Calculated	Joules/g Dry	-7.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T002034			DSC Exotherm using Mettler	Joules/g	None	None	110.7	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a

A Top Quarter of Segment: A Top Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits			Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper	Standard %								
S96T001045			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.5	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T001059			% Water by TGA using Mettler	%	None	None	100.1	n/a	21.25	2.126e1	2.126e1	0.05	n/a	n/a	n/a
S96T001059			DSC Exotherm Dry Calculated	Joules/g Dry	-7.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T001059			DSC Exotherm using Mettler	Joules/g	None	None	112.5	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T001096	F		Alpha of Digested Solid	uCi/g	-7.0e+00	41.00	119.5	<7.050e-3	1.83e-01	1.830e-1	1.830e-1	0.00	n/a	9.000e-3	1.41E+01

=> Limit violated
=> Selected Limit

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WHC-SD-WM-DP-184, REV. 1

WHC-SD-WM-DP-184, REV. 1

INTERIM
U-107 Safety Screening Report
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CORE NUMBER: 134
SEGMENT #: 5B

SEGMENT PORTION: Drainable Liquid

Sample#	R A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
				Lower	Upper										
S96T001107		Specific Gravity	Sp.G.	None	None	97.74	n/a	1.437	1.419e0	1.428e0	1.26	n/a	1.000e-3	n/a	n/a
S96T001119		% Water by TGA on Perkin Elmer	%	None	None	99.61	n/a	51.01	5.114e1	5.108e1	0.25	n/a	n/a	n/a	n/a
S96T001119		DSC Exotherm on Perkin Elmer	Joules/g	None	None	97.64	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a	n/a
S96T001119		DSC Exotherm Dry Calculated	Joules/g Dry	-7.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a	n/a
S96T001119		Alpha in Liquid Samples	uCi/mL	-7.0e+00	61.50	112.5	<4.450e-5	5.36e-03	<4.94E-3	n/a	n/a	n/a	5.000e-3	7.34E+01	

=> Limit violated
=> Selected Limit

2-123

WHC-SD-WM-DR-184, REV. 0

WHC-SD-WM-DR-184, REV. 1

INTERIM

U-107 Safety Screening Report
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CORE NUMBER: 134
SEGMENT #: 6A

SEGMENT PORTION: Liner Liquid

Sample#	R	A#	Analyte	Unit	Action Limits		Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%	
					Lower	Upper									
S96T001120			% Water by TGA on Perkin Elmer	%	None	None	99.61	n/a	89.27	8.910e1	8.919e1	0.19	n/a	n/a	n/a
S96T001120			DSC Exotherm on Perkin Elmer	Joules/g	None	None	97.64	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T001120			DSC Exotherm Dry Calculated	Joules/g Dry	-7.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T001120			Alpha in Liquid Samples	uCi/mL	-7.0e+00	61.50	112.5	<4.450e-5	<2.25e-03	<2.29E-3	n/a	n/a	n/a	5.000e-3	5.00E+02

W Whole Segment: W Whole Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%	
					Lower	Upper									
S96T001046			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.100	n/a	n/a	n/a	5.000e-1	n/a	
S96T001070			% Water by TGA using Mettler	%	None	None	102.9	n/a	91.44	9.102e1	9.123e1	0.46	n/a	n/a	
S96T001070			DSC Exotherm Dry Calculated	Joules/g Dry	-7.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	
S96T001070			DSC Exotherm using Mettler	Joules/g	None	None	113.9	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	
S96T001097	F		Alpha of Digested Solid	uCi/g	-7.0e+00	41.00	119.5	<7.050e-3	1.76e-02	1.270e-2	1.520e-2	32.3	n/a	4.000e-3	3.46E+01

Drainable Liquid: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits		Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%	
					Lower	Upper									
S96T001121			% Water by TGA on Perkin Elmer	%	None	None	99.61	n/a	91.70	9.222e1	9.196e1	101	n/a	n/a	n/a
S96T001121			Specific Gravity	Sp.G.	None	None	97.46	n/a	1.026	1.009e0	1.018e0	1.67	n/a	1.000e-3	n/a
S96T001121			DSC Exotherm on Perkin Elmer	Joules/g	None	None	97.64	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T001121			DSC Exotherm Dry Calculated	Joules/g Dry	-7.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T001121			Alpha in Liquid Samples	uCi/mL	-7.0e+00	61.50	112.5	<4.450e-5	<2.25e-03	<2.29E-3	n/a	n/a	n/a	5.000e-3	5.00E+02

=> Limit violated
=> Selected Limit

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1

WHC-SD-WM-DR-184, REV. 0

WHC-SD-WM-DR-184, REV. 1

INTERIM
U-107 Safety Screening Report
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CORE NUMBER: 134
SEGMENT #: 2

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T001043			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.410	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T001055			% Water by TGA on Perkin Elmer	%	None	None	100.3	n/a	6.940	7.600e0	7.270e0	9.08	n/a	n/a	n/a
S96T001055			DSC Exotherm on Perkin Elmer	Joules/g	None	None	96.63	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T001055			DSC Exotherm Dry Calculated	Joules/g Dry	-7.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T001089	F		Alpha of Digested Solid	uCi/g	-7.0e+00	41.00	116.4	<3.220e-3	1.53e-02	2.030e-2	1.780e-2	28.1	71.31	6.000e-3	3.77E+01

=> Limit violated

=> Selected Limit

2-25

WHC-SD-WM-DP-184, REV. 0

WHC-SD-WM-DP-184, REV. 1

INTERIM
U-107 Safety Screening Report
U-107

CORE NUMBER: 134
SEGMENT #: 3

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%	
					Lower	Upper									
S96T001044			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.540	n/a	n/a	n/a	5.000e-1	n/a	
S96T001056			% Water by TGA on Perkin Elmer	%	None	None	100.3	n/a	13.12	1.226e1	1.269e1	6.78	n/a	n/a	
S96T001056			DSC Exotherm on Perkin Elmer	Joules/g	None	None	96.63	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	
S96T001056			DSC Exotherm Dry Calculated	Joules/g Dry	-7.0e+00	480.00	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	
S96T001090	F		Alpha of Digested Solid	uCi/g	-7.0e+00	41.00	116.4	<3.220e-3	2.74e-02	4.030e-2	3.390e-2	38.1	n/a	4.000e-3	2.31E+01

=> Limit violated
=> Selected Limit

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WHC-SD-WM-DP-184, REV. 0

WHC-SD-WM-DP-184, REV. 1

INTERIM

U-107 Safety Screening Report
U-107

CORE NUMBER: 134
SEGMENT #: 4

SEGMENT PORTION: A Top Quarter of Segment

Sample#	R A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
				Lower	Upper									
S96T001061		Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.740	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T001064		% Water by TGA using Mettler	%	None	None	102.4	n/a	23.61	2.276e1	2.319e1	3.67	n/a	n/a	n/a
S96T001064		DSC Exotherm Dry Calculated	Joules/g Dry	-7.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T001064		DSC Exotherm using Mettler	Joules/g	None	None	106.2	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T001092	F	Alpha of Digested Solid	uCi/g	-7.0e+00	41.00	110.9	<8.720e-3	7.61e-02	7.510e-2	7.560e-2	1.32	94.71	1.400e-2	2.21E+01

B Second Quarter of Segment: B Second Quarter of Segment

Sample#	R A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
				Lower	Upper									
S96T001062		Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.730	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T001065		% Water by TGA using Mettler	%	None	None	102.4	n/a	28.65	2.764e1	2.814e1	1.47	n/a	n/a	n/a
S96T001065		DSC Exotherm Dry Calculated	Joules/g Dry	-7.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T001065		DSC Exotherm using Mettler	Joules/g	None	None	106.2	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T001093	F	Alpha of Digested Solid	uCi/g	-7.0e+00	41.00	110.9	<8.720e-3	9.65e-02	9.800e-2	9.730e-2	1.54	n/a	3.000e-2	3.03E+01

L Lower Half of Segment: L Lower Half of Segment

Sample#	R A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
				Lower	Upper									
S96T001047		Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.660	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T001057		% Water by TGA using Mettler	%	None	None	99.97	n/a	34.53	3.923e1	3.688e1	12.7	n/a	n/a	n/a
S96T001057		DSC Exotherm Dry Calculated	Joules/g Dry	-7.0e+00	480.0	n/a	n/a	2.33e+02	2.345e2	2.337e2	0.68	n/a	n/a	n/a
S96T001057		DSC Exotherm using Mettler	Joules/g	None	None	94.90	n/a	1.47e+02	1.480e2	1.475e2	0.68	n/a	n/a	n/a
S96T001091	F	Alpha of Digested Solid	uCi/g	-7.0e+00	41.00	108.6	<1.180e-2	2.85e-01	3.190e-1	3.020e-1	11.3	n/a	2.000e-2	1.08E+01

=> Limit violated
=> Selected Limit

2
1
2
1

WHO-SD-WM-DP-184, REV. 0

WHC-SD-WM-DP-184, REV. 1

INTERIM

U-107 Safety Screening Report
U-107

CORE NUMBER: 134
SEGMENT #: 5

SEGMENT PORTION: A Top Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits			Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper	Standard %								
S96T001067			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.680	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T001068			% Water by TGA on Perkin Elmer	%	None	None	99.93	n/a	38.28	4.335e1	4.081e1	12.4	n/a	n/a	n/a
S96T001068			DSC Exotherm on Perkin Elmer	Joules/g	None	None	93.78	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T001068			DSC Exotherm Dry Calculated	Joules/g Dry	-7.0e+00	680.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T001095	F		Alpha of Digested Solid	uCi/g	-7.0e+00	41.00	119.5	<7.050e-3	9.10e-01	6.090e-1	7.600e-1	39.6	87.19	1.500e-2	8.08E+00

B Second Quarter of Segment: B Second Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits			Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper	Standard %								
S96T001058			% Water by TGA using Mettler	%	None	None	99.97	n/a	44.21	2.819e1	3.620e1	44.3	n/a	n/a	n/a
S96T001058			DSC Exotherm Dry Calculated	Joules/g Dry	-7.0e+00	680.0	n/a	n/a	18.11	1.255e2	7.181e1	150	n/a	n/a	n/a
S96T001058			DSC Exotherm using Mettler	Joules/g	None	None	94.90	n/a	11.50	7.970e1	4.560e1	150	n/a	n/a	n/a
S96T001066			Bulk Density of Sample	g/ml	None	None	n/a	n/a	1.760	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T001094	F		Alpha of Digested Solid	uCi/g	-7.0e+00	41.00	110.9	<8.720e-3	4.30e-01	3.820e-1	4.060e-1	11.8	n/a	2.900e-2	1.28E+01

=> Limit violated
=> Selected Limit

2
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2
8

WHC-SD-WM-DP-184, REV. 0

WHC-SD-WM-DP-184, REV. 1

INTERIM

U-107 Safety Screening Report
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CORE NUMBER: 135
SEGMENT #: 1R

SEGMENT PORTION: W Whole Segment

Sample#	R	A#	Analyte	Unit	Action Limits			Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper	Standard %								
S96T002132			% Water by TGA using Mettler	%	None	None	99.70	n/a	18.55	1.645e1	1.750e1	12.0	n/a	n/a	n/a
S96T002132			DSC Exotherm Dry Calculated	Joules/g Dry	-7.0e+00	680.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T002132			DSC Exotherm using Mettler	Joules/g	None	None	104.7	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T002135	F		Alpha of Digested Solid	uCi/g	-7.0e+00	41.80	98.44	<1.750e-3	<2.88e-03	<2.76E-3	n/a	n/a	n/a	4.000e-3	2.53E+02

Drainable Liquid: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits			Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper	Standard %								
S96T002141			% Water by TGA using Mettler	%	None	None	99.53	n/a	67.03	4.702e1	4.703e1	0.02	n/a	n/a	n/a
S96T002141			Specific Gravity	Sp.G.	None	None	97.93	n/a	1.474	1.412e0	1.443e0	4.30	n/a	1.000e-3	n/a
S96T002141			DSC Exotherm Dry Calculated	Joules/g Dry	-7.0e+00	680.0	n/a	n/a	5.59e+02	5.160e2	5.376e2	8.04	n/a	n/a	n/a
S96T002141			DSC Exotherm using Mettler	Joules/g	None	None	106.5	n/a	2.96e+02	2.733e2	2.848e2	8.04	n/a	n/a	n/a
S96T002141			Alpha in Liquid Samples	uCi/mL	-7.0e+00	61.50	109.4	<1.330e-2	<1.65e-02	<1.65E-2	n/a	n/a	n/a	2.000e-2	1.67E+02

=> Limit violated
=> Selected Limit

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WHC-SD-WM-DP-184, REV. 0

WHC-SD-WM-DP-184, REV. 1

INTERIM

U-107 Safety Screening Report
U-107

CORE NUMBER: 135
SEGMENT #: 2A

SEGMENT PORTION: W Whole Segment

Sample#	R	A#	Analyte	Unit	Action Limits			Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper	Standard %								
S96T002130			Bulk Density of Sample	g/mL	None	None	n/a	n/a		n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T002133			% Water by TGA using Mettler	%	None	None	99.53	n/a	16.38	1.546e1	1.592e1	5.78	n/a	n/a	n/a
S96T002133			DSC Exotherm Dry Calculated	Joules/g Dry	-7.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T002133			DSC Exotherm using Mettler	Joules/g	None	None	102.6	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T002136	F		Alpha of Digested Solid	uCi/g	-7.0e+00	41.00	115.6	<1.730e-3	1.09e-02	1.940e-2	1.520e-2	56.1	n/a	4.000e-3	4.07E+01

Drainable Liquid: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits			Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper	Standard %								
S96T002142			% Water by TGA using Mettler	%	None	None	99.88	n/a	52.45	5.218e1	5.231e1	0.52	n/a	n/a	n/a
S96T002142			Specific Gravity	Sp.G.	None	None	97.93	n/a	1.665	1.373e0	1.519e0	19.2	n/a	1.000e-3	n/a
S96T002142			DSC Exotherm on Perkin Elmer	Joules/g	None	None	101.6	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T002142			DSC Exotherm Dry Calculated	Joules/g Dry	-7.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T002142			Alpha in Liquid Samples	uCi/mL	-7.0e+00	61.50	109.4	<1.330e-2	<1.17e-02	<1.17e-2	n/a	n/a	n/a	2.000e-2	5.00E+02

=> Limit violated

=> Selected Limit

2-30

WHC-SD-WM-DP-184, REV. 0

WHC-SD-WM-DP-184, REV. 1

INTERIM

U-107 Safety Screening Report
U-107

CORE NUMBER: 135
SEGMENT #: 2R

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits			Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper	Standard %								
S96T001869			Bulk Density of Sample	g/ml	None	None	n/a	n/a	1.300	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T001873			% Water by TGA using Mettler	%	None	None	99.22	n/a	4.670	4.150e0	4.410e0	11.8	n/a	n/a	n/a
S96T001873			DSC Exotherm Dry Calculated	Joules/g Dry	-7.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T001873			DSC Exotherm using Mettler	Joules/g	None	None	96.31	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T001879	F		Alpha of Digested Solid	uCi/g	-7.0e+00	41.00	115.6	<1.730e-3	1.47e-02	1.510e-2	1.490e-2	2.68	66.02	4.000e-3	3.33E+01

L Lower Half of Segment: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits			Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper	Standard %								
S96T001870			Bulk Density of Sample	g/ml	None	None	n/a	n/a	1.310	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T001874			% Water by TGA on Perkin Elmer	%	None	None	98.82	n/a	7.30e-01	9.200e-1	8.250e-1	23.0	n/a	n/a	n/a
S96T001874			DSC Exotherm on Perkin Elmer	Joules/g	None	None	102.6	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T001874			DSC Exotherm Dry Calculated	Joules/g Dry	-7.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T001880	F		Alpha of Digested Solid	uCi/g	-7.0e+00	41.00	115.6	<1.730e-3	1.02e-02	1.220e-2	1.120e-2	17.9	n/a	4.000e-3	4.92E+01

=> Limit violated
=> Selected Limit

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WHC-SD-WM-DP-184, REV. 0

WHC-SD-WM-DP-184, REV. 1

INTERIM

U-107 Safety Screening Report
U-107

CORE NUMBER: 135
SEGMENT #: 1

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits			Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper	Standard %								
S96T002131			% Water by TGA using Mettler	%	None	None	99.70	n/a	32.41	3.723e1	3.482e1	13.8	n/a	n/a	n/a
S96T002131			DSC Exotherm on Perkin Elmer	Joules/g	None	None	101.7	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T002131			DSC Exotherm Dry Calculated	Joules/g Dry	-7.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T002134	F		Alpha of Digested Solid	uCi/g	-7.0e+00	41.00	98.44	<1.750e-3	1.03e-01	9.840e-2	1.010e-1	4.57	79.11	7.000e-3	1.50E+01

Drainable Liquid: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits			Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper	Standard %								
S96T002140			% Water by TGA using Mettler	%	None	None	99.53	n/a	52.73	5.228e1	5.250e1	0.86	n/a	n/a	n/a
S96T002140			Specific Gravity	Sp.G.	None	None	97.93	n/a	1.470	1.392e0	1.431e0	5.45	n/a	1.000e-3	n/a
S96T002140			DSC Exotherm Dry Calculated	Joules/g Dry	-7.0e+00	480.0	n/a	n/a	5.40e+02	5.776e2	5.588e2	6.75	n/a	n/a	n/a
S96T002140			DSC Exotherm using Mettler	Joules/g	None	None	106.5	n/a	2.56e+02	2.743e2	2.654e2	6.75	n/a	n/a	n/a
S96T002140			Alpha in Liquid Samples	uCi/ml	-7.0e+00	61.50	109.4	<1.330e-2	<1.33e-02	<1.33E-2	n/a	n/a	99.44	2.000e-2	5.00E+02

=> Limit violated
=> Selected Limit

2-32

WHC-SD-WM-DP-184, REV. 0

WHC-SD-WM-DP-184, REV. 1

INTERIM

U-107 Safety Screening Report
U-107

CORE NUMBER: 135
SEGMENT #: 2

SEGMENT PORTION: Liner Liquid

Sample#	R A#	Analyte	Unit	Action Limits			Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
				Lower	Upper	Standard %								
S96T001865		Specific Gravity	Sp.G.	None	None	98.38	n/a	1.030	1.030e0	1.030e0	0.00	n/a	1.000e-3	n/a
S96T001866		% Water by TGA using Mettler	%	None	None	100.3	n/a	94.44	9.393e1	9.419e1	0.54	n/a	n/a	n/a
S96T001866		DSC Exotherm Dry Calculated	Joules/g Dry	-7.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T001866		DSC Exotherm using Mettler	Joules/g	None	None	113.5	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T001866		Alpha in Liquid Samples	uCi/mL	-7.0e+00	61.50	112.5	<7.280e-4	<5.51e-04	<6.41E-4	n/a	n/a	114.8	1.000e-3	5.00E+02

U Upper Half of Segment: U Upper Half of Segment

Sample#	R A#	Analyte	Unit	Action Limits			Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
				Lower	Upper	Standard %								
S96T001867		% Water by TGA using Mettler	%	None	None	99.19	n/a	49.90	4.974e1	4.982e1	0.32	n/a	n/a	n/a
S96T001867		DSC Exotherm Dry Calculated	Joules/g Dry	-7.0e+00	480.0	n/a	n/a	2.80e+02	2.096e2	2.449e2	28.8	n/a	n/a	n/a
S96T001867		DSC Exotherm using Mettler	Joules/g	None	None	96.31	n/a	1.41e+02	1.052e2	1.229e2	28.8	n/a	n/a	n/a
S96T001868	F	Alpha of Digested Solid	uCi/g	-7.0e+00	41.00	98.44	<1.750e-3	3.29e-01	3.480e-1	3.390e-1	5.61	n/a	4.000e-3	6.07E+00

=> Limit violated
=> Selected Limit

2-33

WHC-SD-WM-DP-184, REV. 0

WHC-SD-WM-DP-184, REV. 1

WHC-SD-WM-DP-184, REV. 1

DOME SPACE VAPOR FLAMMABILITY DATA SHEETS

WHC-SD-WM-DP-184, REV. 1

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~~CONTROLLED COPY~~~~WHC-SD-WM-DP-184, REV. 1~~

Printed on: Jan 30, 96 16:19 pm

DATA SHEET 7 - IH&S VAPOR SURVEY

Tank No. U-107

2/6/96

Riser No. 9Location (Breather/Vent, Riser,
Dome Space, Breathing zone)

Vapor:

10:15 AM

LELO₂TOCNH₃Tank No. U-107Location (Breather/Vent, Riser,
Dome Space, Breathing zone)

Vapor:

10:00 AM

LELO₂TOCNH₃Tank No. U-107Location (Breather/Vent, Riser,
Dome Space, Breathing zone)Vapor: TruckShielded Rebar / Anti Rod / Drill StringLELO₂TOCNH₃

Results:

0%21.1%2 ppm~90 ppmRiser No. 9

Results:

1%20.8%14 ppm400 ppmRiser No. 9

Results:

0% / 0% / 0%20.9% / 14% / 12%0 ppm / <2 ppm / <2 ppm- / <5 ppm / <5 ppm

2-35

WORKING COPY WHC-SD-WM-DP-184, REV. 1 Printed on: Feb 15, 96 15:17 pm
WHC-SD-WM-DP-184, REV. 0

DATA SHEET 9 - IH&S FLAMMABLE GAS MONITORING

Tank No. U-107Riser No. 7Date 2-15-96

NOTE- Vapor survey for Single Shell Tanks with hand held combustible gas meter and probe per HASP or SHMS shall be recorded every 15 minutes.

NOTE- Vapor survey for Double Shell Tank in vent header or SHMS, if operable, recorded every 15 minutes with hand held combustible gas meter per HASP

I need value.
thusLocation (Vent Header or Dome Space)Differential Limit ?

Vapor sample every 15 minutes and record below:

TIME	FLAMMABLE GAS, % LFL OR PPM	INITIALS
2025	0% LFL	J.C.
* 2130	1% LFL	J.C.
2145	1% LFL	J.C.
2200	1% LFL	J.C.

* Drill string (first containment breach) done here.

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**WHC-SD-WM-DP-184, REV. 0
DATA SHEET 7 - IH&S VAPOR SURVEY**

Tank No. U1072/9/96Riser No. 9Location (Breather/Vent, Riser,
Dome Space, Breathing zone)

Vapor:

O₂
CG
TOV
NH₃

Results:

20.9%
0%
0 ppm
0 ppm

Tank No. U-107Riser No. 9Location (Breather/Vent, Riser,
Dome Space, Breathing zone)

Vapor:

O₂
CG
TOV
NH₃

Results:

20.8%
1%
75 ppm
600 ppm

Tank No. truck

Riser No. _____

Location (Breather/Vent, Riser,
Dome Space, Breathing zone)drill string / shielded receiver / quill rod

Vapor:

O₂
CG
TOV

Results:

17.9% / 20.8% / 4%
0% / 0% / 0%
0 ppm / 0 ppm / 0 ppm

WHC-SD-WM-DP-184, REV. 0
DATA SHEET 7 - IH&S VAPOR SURVEYTank No. U-107Riser No. 7Location (Breather/Vent, Riser,
Dome Space, Breathing zone)

Vapor:

LELO₂TOCNH₃Tank No. U-107

Results:

0%21.2%0 ppm0 ppmRiser No. 7Location (Breather/Vent, Riser,
Dome Space, Breathing zone)

Vapor:

LELO₂TOCNH₃Tank No. U-107

Results:

0%21.1%20 ppm400 ppmRiser No. 7Location (Breather/Vent, Riser,
Dome Space, Breathing zone)Vapor: TruckLELO₂TOCNH₃

Results:
 Quinical / Shirked Revr 10 min 87
0% / 0% 0%
15% / 21.2% 15%
0 ppm / 0 ppm 0 ppm
- / - 0 ppm

* First sample pushed

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Rev/Mod

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WHC-SD-WM-DP-184, REV. 0

DATA SHEET 7 - IH&S VAPOR SURVEY

Tank No. 4-107

2/20/96

Riser No. 7

Location (Breather/Vent, Riser,
Dome Space, Breathing zone)

Vapor:

LEL

O₂

TOC

NH₃

Tank No. U-107

Results:

0%

26.1%

1 ppm

0 ppm

Riser No. 7

Location (Breather/Vent, Riser,
Dome Space, Breathing zone)

Vapor:

LEL

O₂

TOC

NH₃

Tank No. U-107

Results:

3%

22.8%

22 ppm

400 ppm

Riser No. 7

Location (Breather/Vent, Riser,
Dome Space, Breathing zone)

Vapor: Truck

LEL

O₂

TOC

NH₃

Results:

0% / 0% / 0% / 0% / 0%

11.5% / - / - / - / 15.5%

2 ppm / 1 ppm / 2 ppm / 1 ppm / 2 ppm

0 ppm / 0 ppm / 0 ppm / 0 ppm / 0 ppm

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WHC-SD-WM-DP-184, REV. 0
DATA SHEET 7 - IH&S VAPOR SURVEYTank No. 4-1072/21/96Riser No. 7Location (Breather) Vent, Riser,
Dome Space, Breathing zone)

Vapor:

LELO₂TOCNH₃Tank No. U-107Location (Breather/Vent, Riser,
Dome Space Breathing zone)

Vapor:

LELO₂TOCNH₃Tank No. U-107Location (Breather/Vent, Riser,
Dome Space, Breathing zone)

Vapor:

TruckLELO₂TOCNH₃

Results:

0%21.1%0 ppm0 ppmRiser No. 7

Results:

4%20.8%26 ppm400 ppmRiser No. 7

Results:

Quill Rod / Shld Revr / Drill String	<u>O₂</u>	<u>0%</u>	<u>0%</u>
11.2%	-	20.9%	
2 ppm	0 ppm	1 ppm	
-	-	-	

WHC-SD-WM-DP-184, REV. 1

STATISTICAL ANALYSIS

WHC-SD-WM-DP-184, REV. 1

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TGA										
Sample#	Result	DUP	TRIP	Mean	StDev(Mean)	95% LL	Core	Riser	Seg	Segment Portion
S96T000665	51.94	54.51		53.23	1.29	45.11	129	9	1	Drainable Liquid
S96T000683	18.52	19.37		18.95	0.43	16.26	129	9	1	L Lower Half of Segment
S96T000644	48.57	47.34		47.96	0.62	44.07	129	9	2	U Upper Half of Segment
S96T000647	21.1	18.26		19.68	1.42	10.71	129	9	2	L Lower Half of Segment
S96T000682	49.79	49.55		49.67	0.12	48.91	129	9	2	Drainable Liquid
S96T000650	22.19	26.84		24.52	2.33	9.83	129	9	3	U Upper Half of Segment
S96T000653	16.78	17.43		17.11	0.32	15.05	129	9	3	L Lower Half of Segment
S96T001143	4.96	6.36	7.87	6.40	0.84	3.94	129	9	3R	W Whole Segment
S96T001159	18.01	21.43	21.25	20.23	1.11	16.99	129	9	Core Compo	Core Composite
S96T001055	6.94	7.6		7.27	0.33	5.19	134	7	2	Drainable Liquid
S96T001056	13.12	12.26		12.69	0.43	9.97	134	7	3	W Whole Segment
S96T001057	34.53	39.23		36.88	2.35	22.04	134	7	4	L Lower Half of Segment
S96T001064	23.61	22.76		23.19	0.42	20.50	134	7	4	A Top Quarter of Segment
S96T001065	28.65	27.64		28.15	0.50	24.96	134	7	4	B Second Quarter of Segment
S96T001058	44.21	28.19	37.14	36.51	4.64	22.98	134	7	5	B Second Quarter of Segment
S96T001068	38.28	43.35		40.82	2.54	24.81	134	7	5	A First Quarter of Segment
S96T001059	21.25	21.26		21.26	0.00	21.22	134	7	5A	W Whole Segment
S96T002034	98.17	98.14		98.16	0.01	98.06	134	7	5A	Liner Liquid
S96T001119	51.01	51.14		51.08	0.06	50.66	134	7	5B	Drainable Liquid
S96T001070	91.44	91.02		91.23	0.21	89.90	134	7	6A	W Whole Segment
S96T001120	89.27	89.1		89.19	0.08	88.65	134	7	6A	Liner Liquid
S96T001121	91.7	92.22		91.96	0.26	90.32	134	7	6A	Drainable Liquid
S96T001128	18.94	24.24		21.59	2.65	4.86	134	7	n/a	n/a
S96T002131	32.41	37.23		34.82	2.41	19.60	135	2	1	W Whole Segment
S96T002140	52.73	52.28		52.51	0.23	51.08	135	2	1	Drainable Liquid
S96T001867	49.9	49.74		49.82	0.08	49.31	135	2	2	W Whole Segment
S96T002132	18.55	16.45		17.50	1.05	10.87	135	2	1R	W Whole Segment
S96T002141	47.03	47.02		47.03	0.00	46.99	135	2	1R	Drainable Liquid
S96T002133	16.38	15.46		15.92	0.46	13.02	135	2	2A	W Whole Segment
S96T002142	52.45	52.18		52.32	0.14	51.46	135	2	2A	Drainable Liquid
S96T001873	4.67	4.15		4.41	0.26	2.77	135	2	2R	A Top Quarter of Segment
S96T001874	0.73	0.92		0.83	0.10	0.23	135	2	2R	B Second Quarter of Segment
S96T000792	51.31	51.47		51.39	0.08	50.88	n/a	7	U-107-1	n/a
Alpha										
Sample#	Result	DUP	TRIP	Mean	Stds(Mean)	95% UL	Core #	Riser	Seg#	Segment Portion
S96T000665	1.72E-02	1.72E-02	1.72E-02	1.72E-02	0.00E+00	1.72E-02	129	9	1	Drainable Liquid
S96T000684	2.43E-03	5.12E-03		3.78E-03	1.35E-03	1.23E-02	129	9	1	L Lower Half of Segment
S96T000682	1.09E-02	1.09E-02	1.09E-02	1.09E-02	0.00E+00	1.09E-02	129	9	2	Drainable Liquid
S96T000687	1.54E-01	1.70E-01	1.62E-01	8.00E-03	2.13E-01	129	9	2	L Lower Half of Segment	
S96T000689	3.36E-02	3.71E-02	3.54E-02	1.75E-03	4.64E-02	129	9	3	L Lower Half of Segment	
S96T001153	4.64E-02	3.22E-02	3.93E-02	7.10E-03	8.41E-02	129	9	3R	W Whole Segment	
S96T001162	3.87E-02	3.60E-02	3.74E-02	1.35E-03	4.59E-02	129	9	Core compo	Core Composite	
S96T001089	1.53E-02	2.03E-02	1.78E-02	2.50E-03	3.36E-02	134	7	2	W Whole Segment	
S96T001090	2.74E-02	4.03E-02	3.39E-02	6.45E-03	7.46E-02	134	7	3	W Whole Segment	
S96T001091	2.85E-01	3.19E-01	3.02E-01	1.70E-02	4.09E-01	134	7	4	L Lower Half of Segment	
S96T001092	7.61E-02	7.51E-02	7.56E-02	5.00E-04	7.88E-02	134	7	4	A Top Quarter of Segment	
S96T001093	9.65E-02	9.80E-02	9.73E-02	7.50E-04	1.02E-01	134	7	4	B Second Quarter of Segment	
S96T001094	4.30E-01	3.82E-01		4.06E-01	2.40E-02	5.58E-01	134	7	5	B Second Quarter of Segment

WHC-SD-WM-DP-184, REV. 0

WHC-SD-WM-DP-184, REV. 1

S96T001095	9.10E-01	6.09E-01		7.60E-01	1.51E-01	1.71E+00	134	7	5	A Top Quarter of Segment
S96T001096	1.83E-01	1.83E-01		1.83E-01	0.00E+00	1.83E-01	134	7	5A	W Whole Segment
S96T001110	6.30E-05	4.54E-05		5.42E-05	8.80E-06	1.10E-04	134	7	5A	Liner Liquid
S96T001119	5.36E-03	4.94E-03		5.15E-03	2.10E-04	6.48E-03	134	7	5B	Drainable Liquid
S96T001097	1.76E-02	1.27E-02		1.52E-02	2.45E-03	3.06E-02	134	7	6A	W Whole Segment
S96T001120	2.25E-03	2.29E-03		2.27E-03	2.00E-05	2.40E-03	134	7	6A	Liner Liquid
S96T001121	2.25E-03	2.29E-03		2.27E-03	2.00E-05	2.40E-03	134	7	6A	Drainable Liquid
S96T001132	1.71E-01	1.54E-01		1.63E-01	8.50E-03	2.16E-01	134	7	Core Compo	Core Composite
S96T002134	1.03E-01	9.84E-02		1.01E-01	2.30E-03	1.15E-01	135	2	1	W Whole Segment
S96T002140	1.33E-02	1.33E-02		1.33E-02	0.00E+00	1.33E-02	135	2	1	Drainable Liquid
S96T001866	5.51E-04	6.41E-04		5.96E-04	4.50E-05	8.80E-04	135	2	2	Liner Liquid
S96T001868	3.29E-01	3.48E-01		3.39E-01	9.50E-03	3.98E-01	135	2	2	W Whole Segment
S96T002135	2.68E-03	2.76E-03		2.82E-03	6.00E-05	3.20E-03	135	2	1R	W Whole Segment
S96T002141	1.65E-02	1.65E-02		1.65E-02	0.00E+00	1.65E-02	135	2	1R	Drainable Liquid
S96T002136	1.09E-02	1.94E-02		1.52E-02	4.25E-03	4.20E-02	135	2	2A	W Whole Segment
S96T002142	1.17E-02	1.17E-02		1.17E-02	0.00E+00	1.17E-02	135	2	2A	Drainable Liquid
S96T001879	1.47E-02	1.51E-02		1.49E-02	2.00E-04	1.62E-02	135	2	2R	A Top Quarter of Segment
S96T001880	1.02E-02	1.22E-02		1.12E-02	1.00E-03	1.75E-02	135	2	2R	B Second Quarter of Segment

2-47

DSC													
Sample#	Result	DUP	TRIP	Mean	StdDev(Mean)	95% UL	Matrix	Core #	Riser	Seg#	Segment	Portion	
S96T000665	117.2	114.8		116.00	1.20	123.58	LIQUID	129	9	1	Drainable Liquid		
S96T000683	15.3	14.07		14.69	0.62	18.57	SOLID	129	9	1	L Lower Half of Segment		
S96T000644	271.3	253.8		262.55	8.75	317.80	SOLID	129	9	2	U Upper Half of Segment		
S96T000647	11.95	10.21		11.08	0.87	16.57	SOLID	129	9	2	L Lower Half of Segment		
S96T000682	129.7	126.6		128.15	1.55	137.94	LIQUID	129	9	2	Drainable Liquid		
S96T000650	33.78	14.18		23.98	9.80	85.86	SOLID	129	9	3	U Upper Half of Segment		
S96T000653	16.77	36.19		26.48	9.71	87.79	SOLID	129	9	3	L Lower Half of Segment		
S96T001143	0	0	0	0.00	0.00	0.00	SOLID	129	9	3R	W Whole Segment		
S96T001159	11.8	18.2		15.00	3.20	35.20	SOLID	129	9	Core Compo	Core Composite		
S96T001055	0	0		0.00	0.00	0.00	SOLID	134	7	2	W Whole Segment		
S96T001056	0	0		0.00	0.00	0.00	SOLID	134	7	3	W Whole Segment		
S96T001057	232.9	234.5		233.70	0.80	238.75	SOLID	134	7	4	L Lower Half of Segment		
S96T001064	0	0		0.00	0.00	0.00	SOLID	134	7	4	A Top Quarter of Segment		
S96T001065	0	0		0.00	0.00	0.00	SOLID	134	7	4	B Second Quarter of Segment		
S96T001058	18.11	125.5	39.22	60.94	32.85	156.86	SOLID	134	7	5	B Second Quarter of Segment		
S96T001068	0	0		0.00	0.00	0.00	SOLID	134	7	5	A Top Quarter of Segment		
S96T001059	0	0		0.00	0.00	0.00	SOLID	134	7	5A	W Whole Segment		
S96T002034	0	0		0.00	0.00	0.00	LIQUID	134	7	5A	Liner Liquid		
S96T001119	0	0		0.00	0.00	0.00	LIQUID	134	7	5B	Drainable Liquid		
S96T001070	0	0		0.00	0.00	0.00	SOLID	134	7	6A	W Whole Segment		
S96T001120	0	0		0.00	0.00	0.00	LIQUID	134	7	6A	Liner Liquid		
S96T001121	0	0		0.00	0.00	0.00	LIQUID	134	7	6A	Drainable Liquid		
S96T001128	0	0		0.00	0.00	0.00	SOLID	134	7	n/a	n/a		
S96T002131	0	0		0.00	0.00	0.00	SOLID	135	2	1	W Whole Segment		
S96T002140	539.9	577.6		558.75	18.85	677.77	LIQUID	135	2	1	Drainable Liquid		
S96T001867	280.2	209.6		244.90	35.30	467.78	SOLID	135	2	2	W Whole Segment		
S96T002132	0	0		0.00	0.00	0.00	SOLID	135	2	1R	W Whole Segment		
S96T002141	559.2	516		537.60	21.60	673.98	LIQUID	135	2	1R	Drainable Liquid		
S96T002133	0	0		0.00	0.00	0.00	SOLID	135	2	2A	W Whole Segment		
S96T002142	0	0		0.00	0.00	0.00	LIQUID	135	2	2A	Drainable Liquid		
S96T001873	0	0		0.00	0.00	0.00	SOLID	135	2	2R	A Top Quarter of Segment		
S96T001874	0	0		0.00	0.00	0.00	SOLID	135	2	2R	B Second Quarter of Segment		

WHC-SD-WM-DP-184, REV. 1

INORGANIC ANALYSES

WHC-SD-WM-DP-184, REV. 1

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LABCORE Data Entry Template for Worklist#

5892

Analyst: BMcClownInstrument: DSC0 1Book # 12N14BMethod: LA-514-113 Rev/Mod C - 1

Worklist Comment: U-107 DSC RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		DSC-01	SOLID	<u>28.45</u>	<u>30.0</u>	<u>N/A</u>	Joules/g
96000085	U-107	2 SAMPLE	S96T000644 0	DSC-01	SOLID	<u>N/A</u>	<u>141.2</u>		Joules/g
96000085	U-107	3 DUP	S96T000644 0	DSC-01	SOLID	<u>141.2</u>	<u>132.1</u>	<u>N/A</u>	Joules/g
96000085	U-107	4 SAMPLE	S96T000647 0	DSC-01	SOLID	<u>N/A</u>	<u>9.6</u>		Joules/g
96000085	U-107	5 DUP	S96T000647 0	DSC-01	SOLID	<u>9.6</u>	<u>8.2</u>	<u>N/A</u>	Joules/g

Final page for worklist # 5892BMcClown 3/6/96
Analyst Signature DateDan Homan 3-13-96
Analyst Signature DateVerified by Blandina Valenzuela
3/19/96

Data Entry Comments:

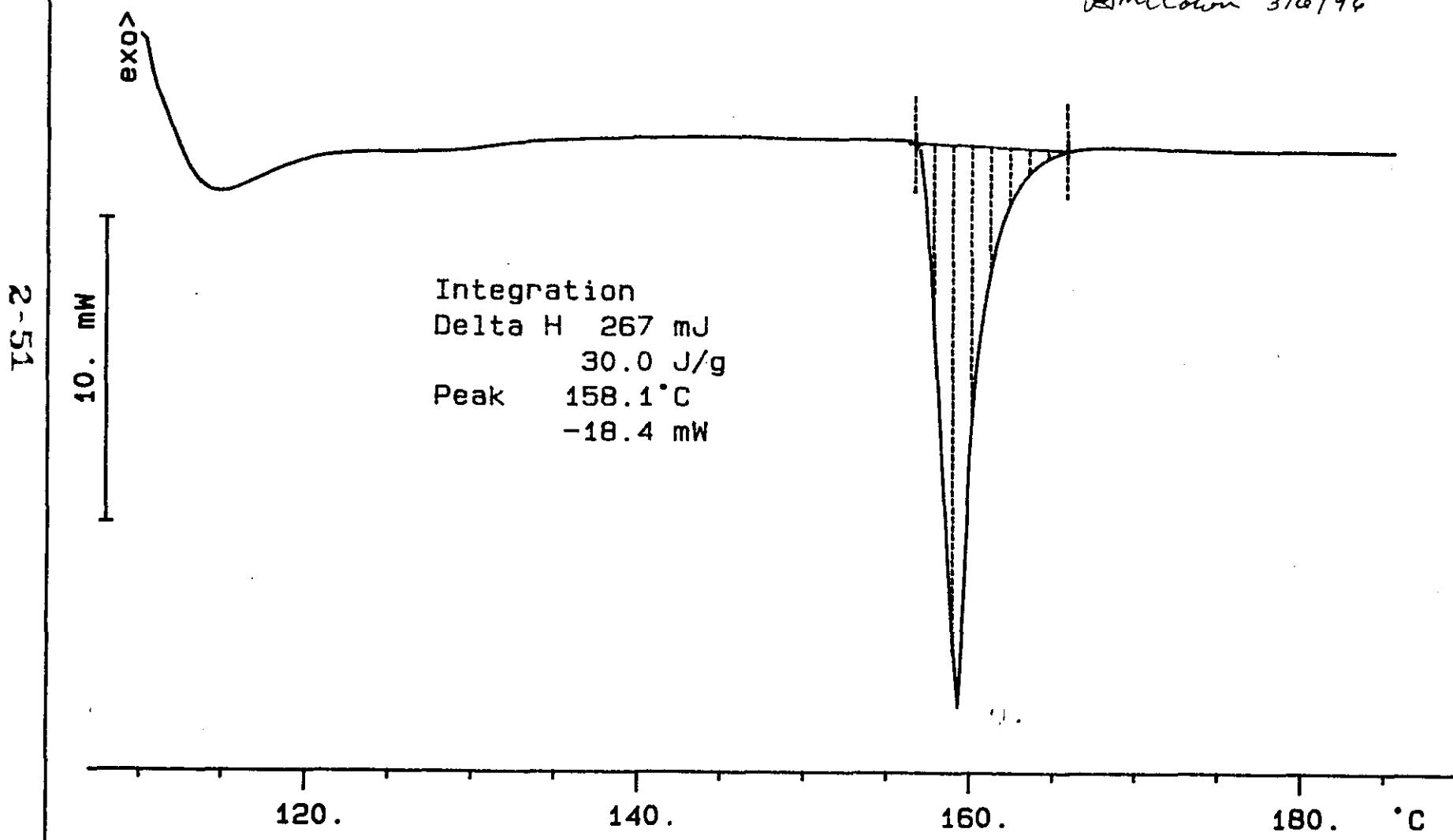
S96T000644 produced an endotherm at 125.3°C with a delta H of 1243.8 J/g.S96T000647 produced two additional endotherms one at 136.2°C with a delta H of 427 J/g and second at 303.2°C with a delta H of 106.35 J/g.
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

DSC STD 12N14B
8.901 mg

Rate: 10.0 °C/min

File: 00058.001
Ident: 0.0

DSC METTLER 07-Mar-96
222-S Laboratory
RMcCorm 3/6/96



SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 251 TO 255.

S96T000644 SAM N2

21.138 mg

Rate: 10.0 °C/min

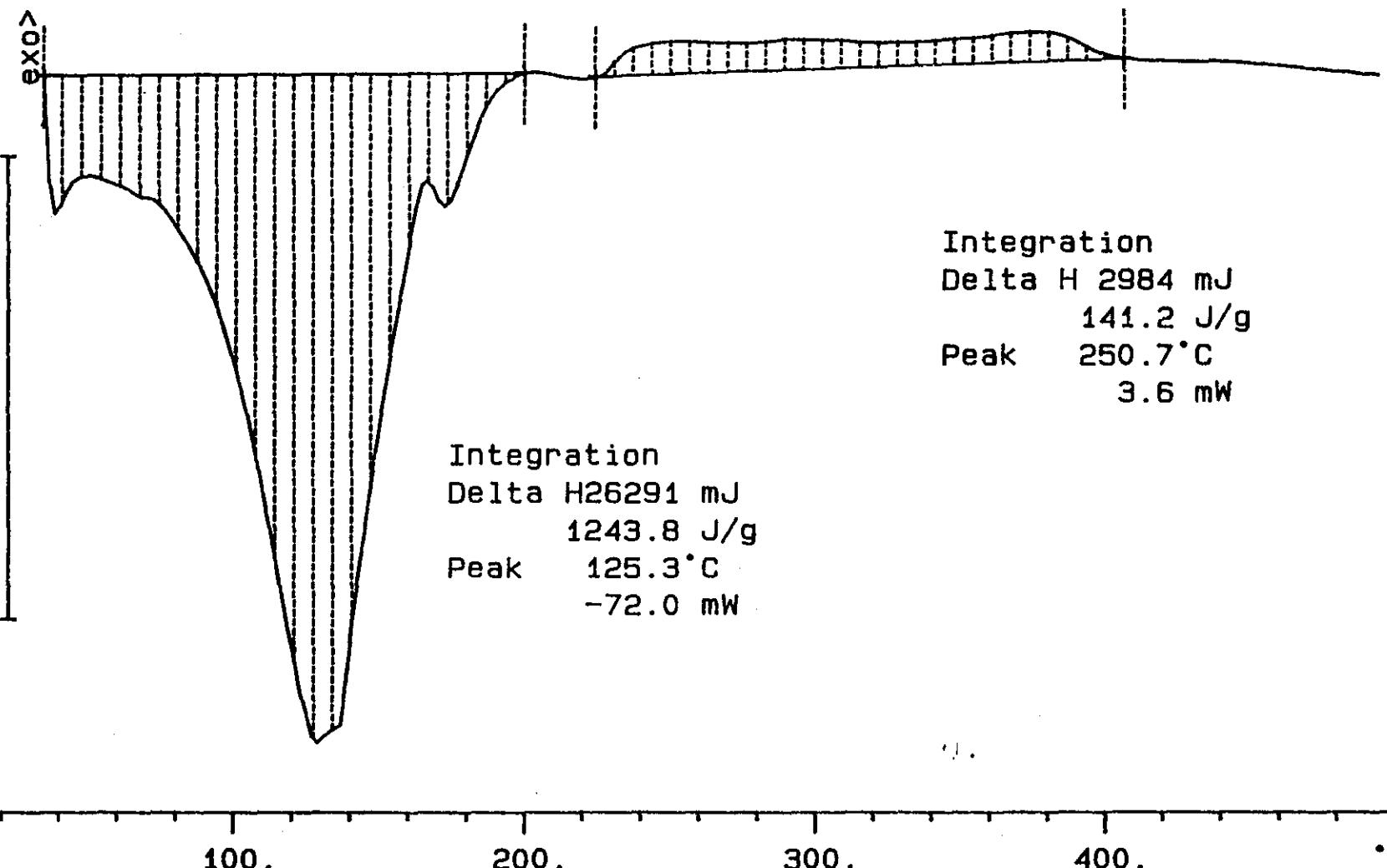
File: 00060.001

Ident: 0.0

DSC METTLER

06-Mar-96

222-S Laboratory



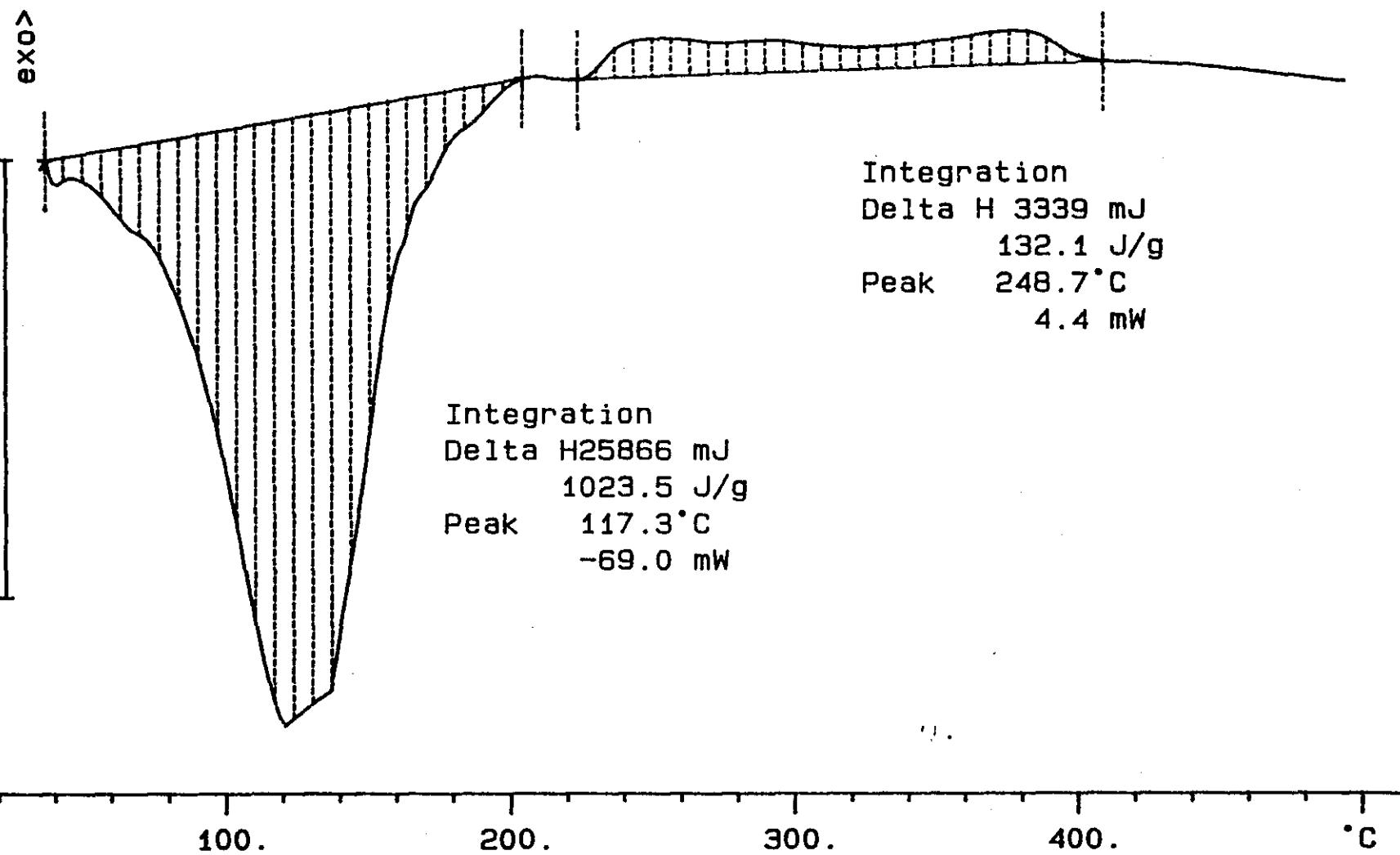
S96T000644 DUP N2

25.271 mg

Rate: 10.0 °C/min

File: 00062.001 DSC METTLER 06-Mar-96

Ident: 0.0 222-S Laboratory



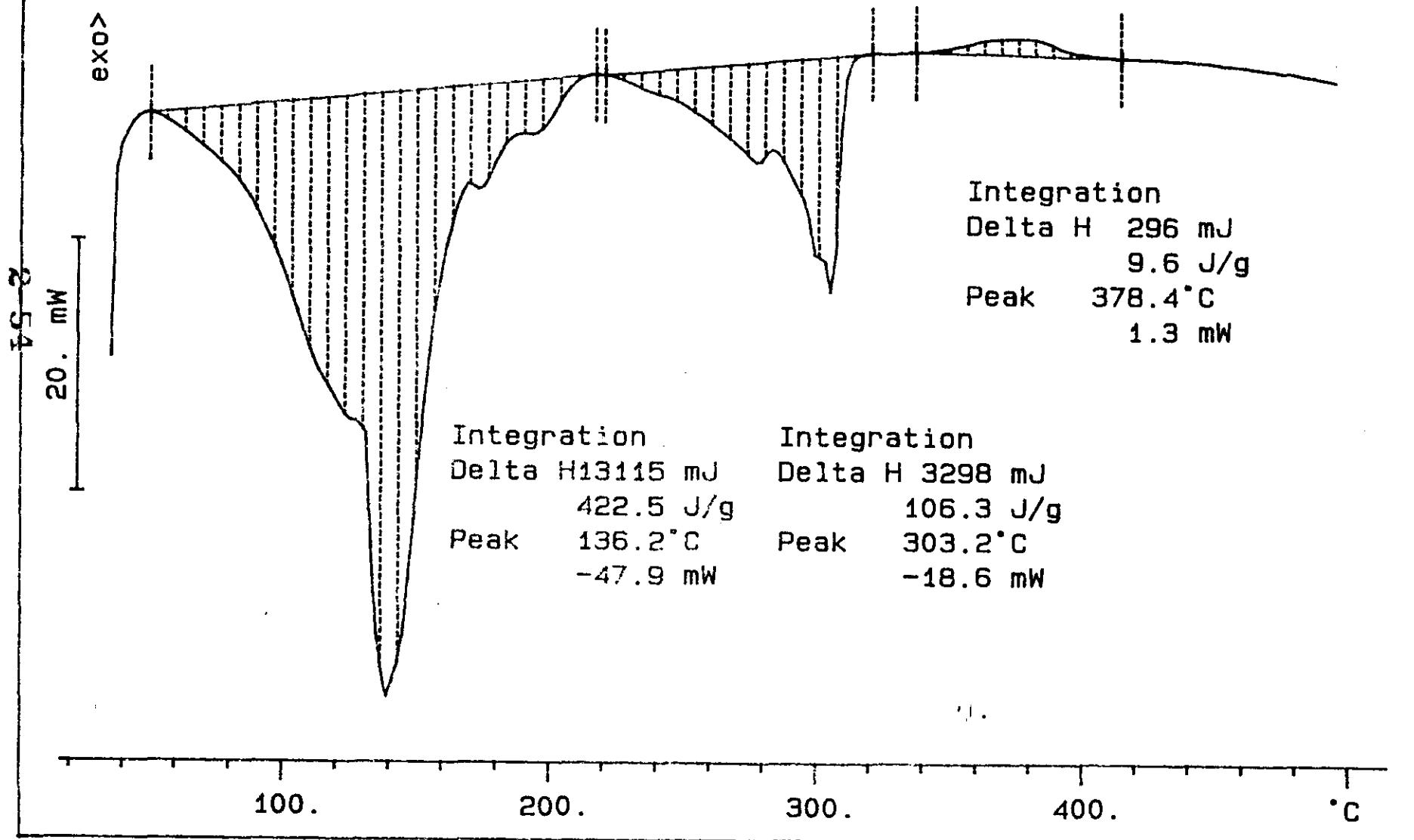
S96T000647 SAM N2

31.042 mg

Rate: 10.0 °C/min

File: 00064.001 DSC METTLER 06-Mar-96

Ident: 0.0 222-S Laboratory



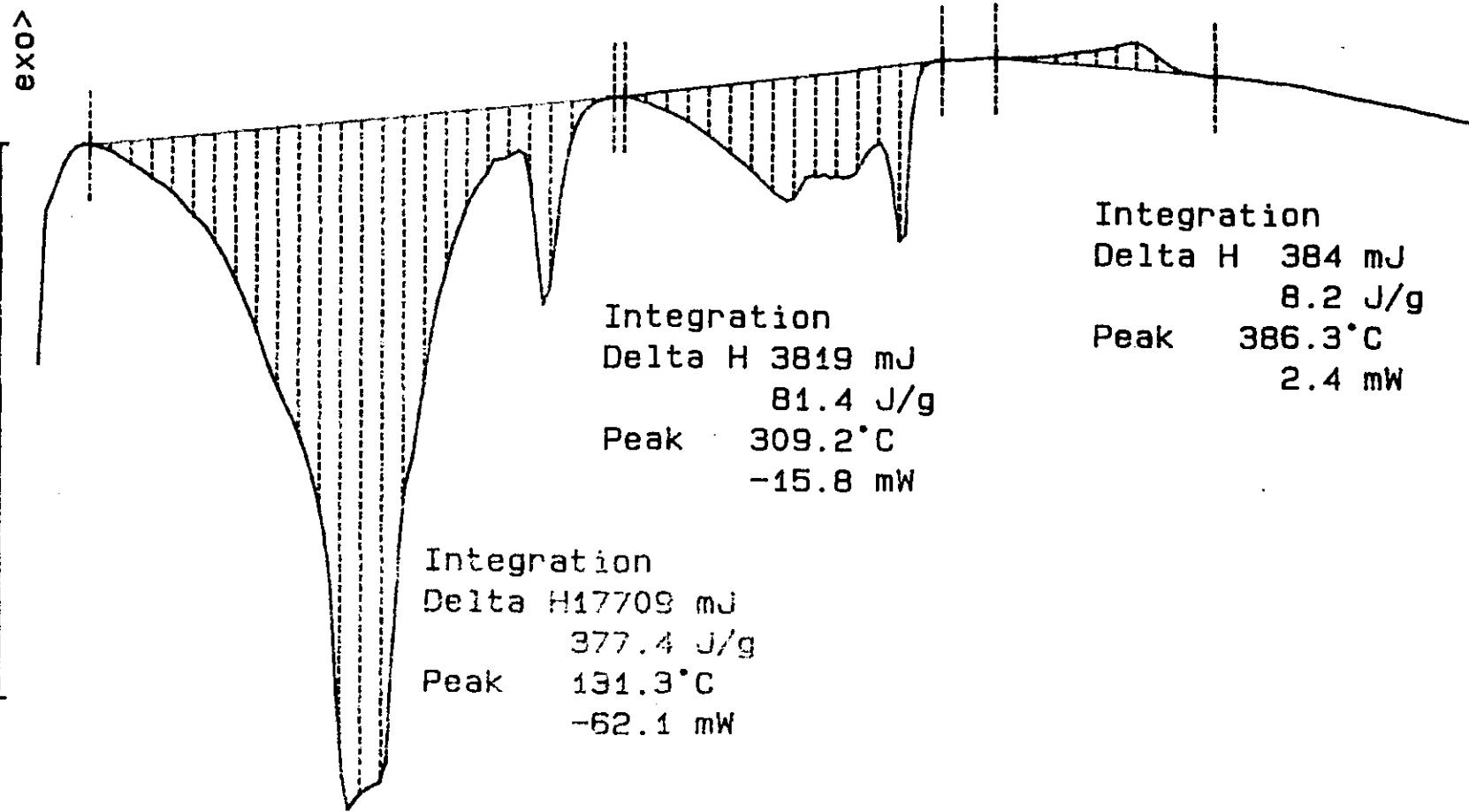
S96T000647 DUP N2

46.918 mg

Rate: 10.0 °C/min

File: 00066.001 DSC METTLER 06-Mar-96

Ident: 0.0 222-S Laboratory



LABCORE Data Entry Template for Worklist#

5893

Analyst: RJM

Instrument: DSC0 1

Book # 12N14BMethod: LA-514-113 Rev/Mod C-1

Worklist Comment: U-107 DSC RUN UNDER N2. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
			1 STD				DSC-01	SOLID	<u>28.45</u>	<u>30.2*</u>	<u>N/A</u>	Joules/g
96000085	U-107	2	SAMPLE	S96T000650	0		DSC-01	SOLID	<u>N/A</u>	<u>25.5</u>		Joules/g
96000085	U-107	3	DUP	S96T000650	0		DSC-01	SOLID	<u>25.5</u>	<u>10.7</u>	<u>N/A</u>	Joules/g
96000085	U-107	4	SAMPLE	S96T000653	0		DSC-01	SOLID	<u>N/A</u>	<u>13.9</u>		Joules/g
96000085	U-107	5	DUP	S96T000653	0		DSC-01	SOLID	<u>13.9</u>	<u>30.0</u>	<u>N/A</u>	Joules/g

Final page for worklist # 5893RJM3/6/96

Analyst Signature

Date

RCJ3-6-96

Analyst Signature

Date

Verified by Blandina Valenzuela
3/7/96Data Entry Comments: S96T000650 produced a large endotherm at 123.3°C with a delta H of 1074.5 J/g.S96T000653 produced a large endotherm at 8133.3°C with a delta H of 852.2 J/g.

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 256 TO 261.

DSC STD 12N14B

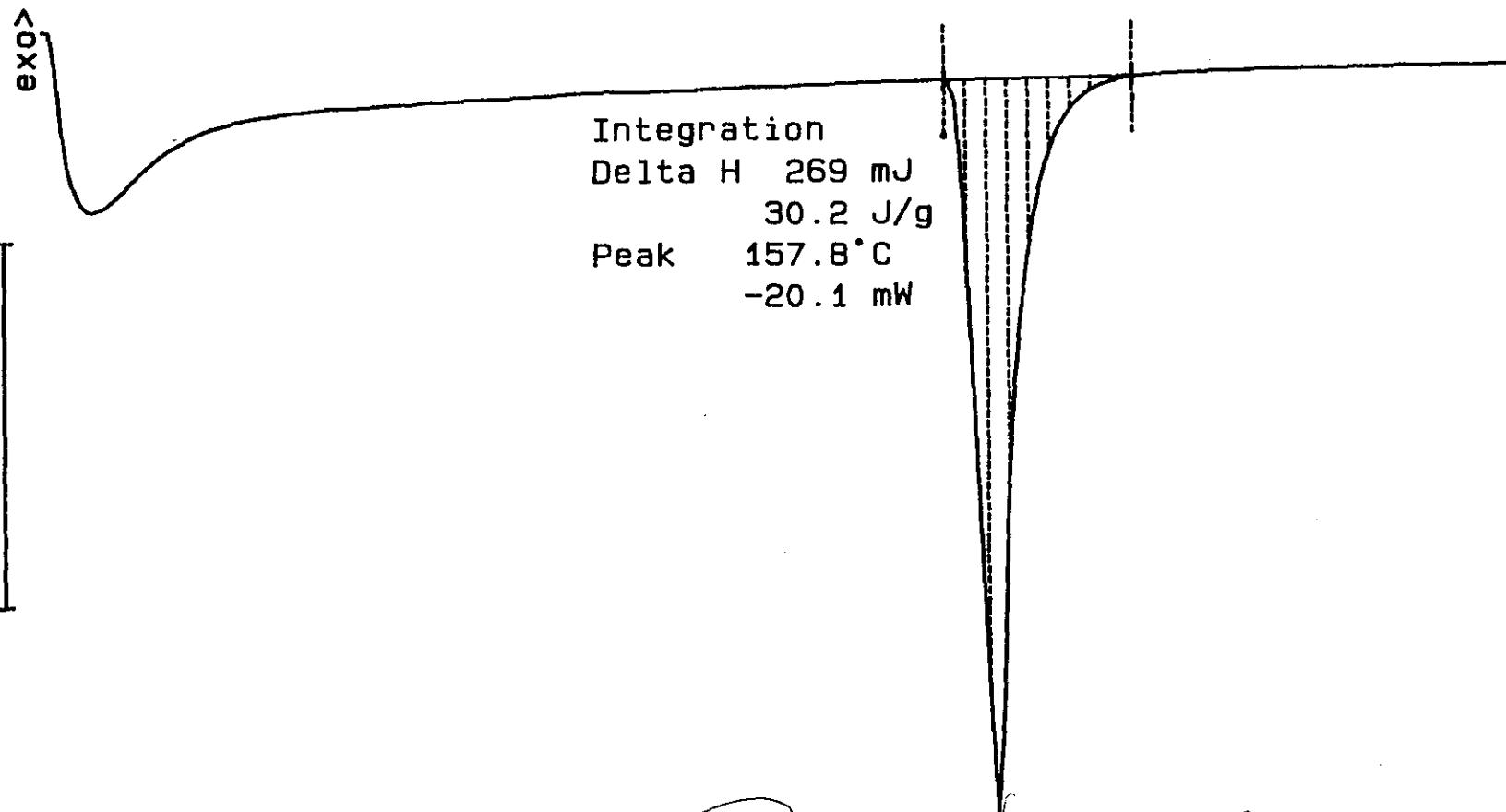
8.901 mg

Rate: 10.0 °C/min

File: 00041.001

Ident: 0.0

DSC METTLER 06-Mar-96
222-S Laboratory



Blandina Valenzuela for RD Meyers

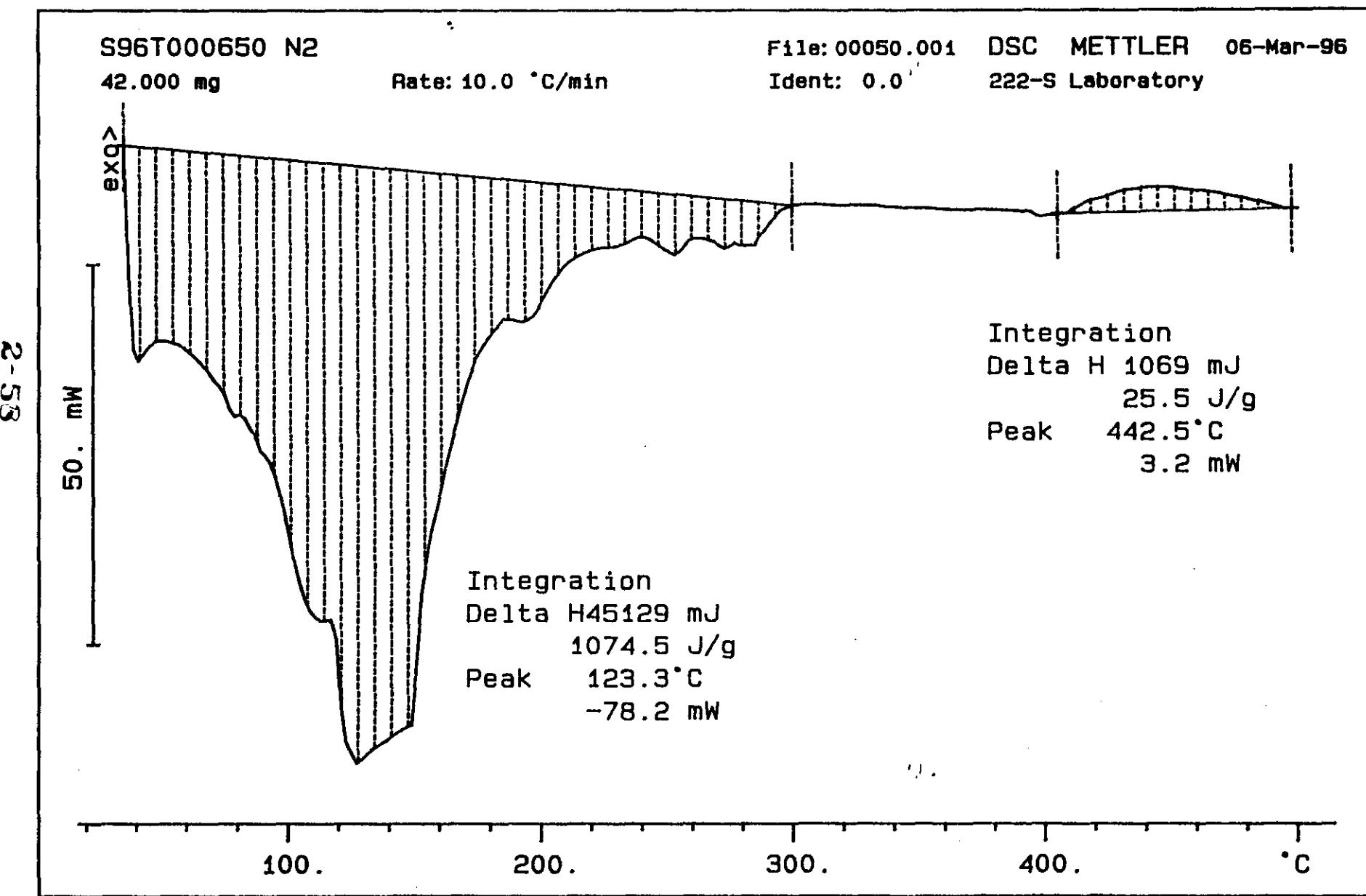
3/7/96

180. °C

120.

140.

160.

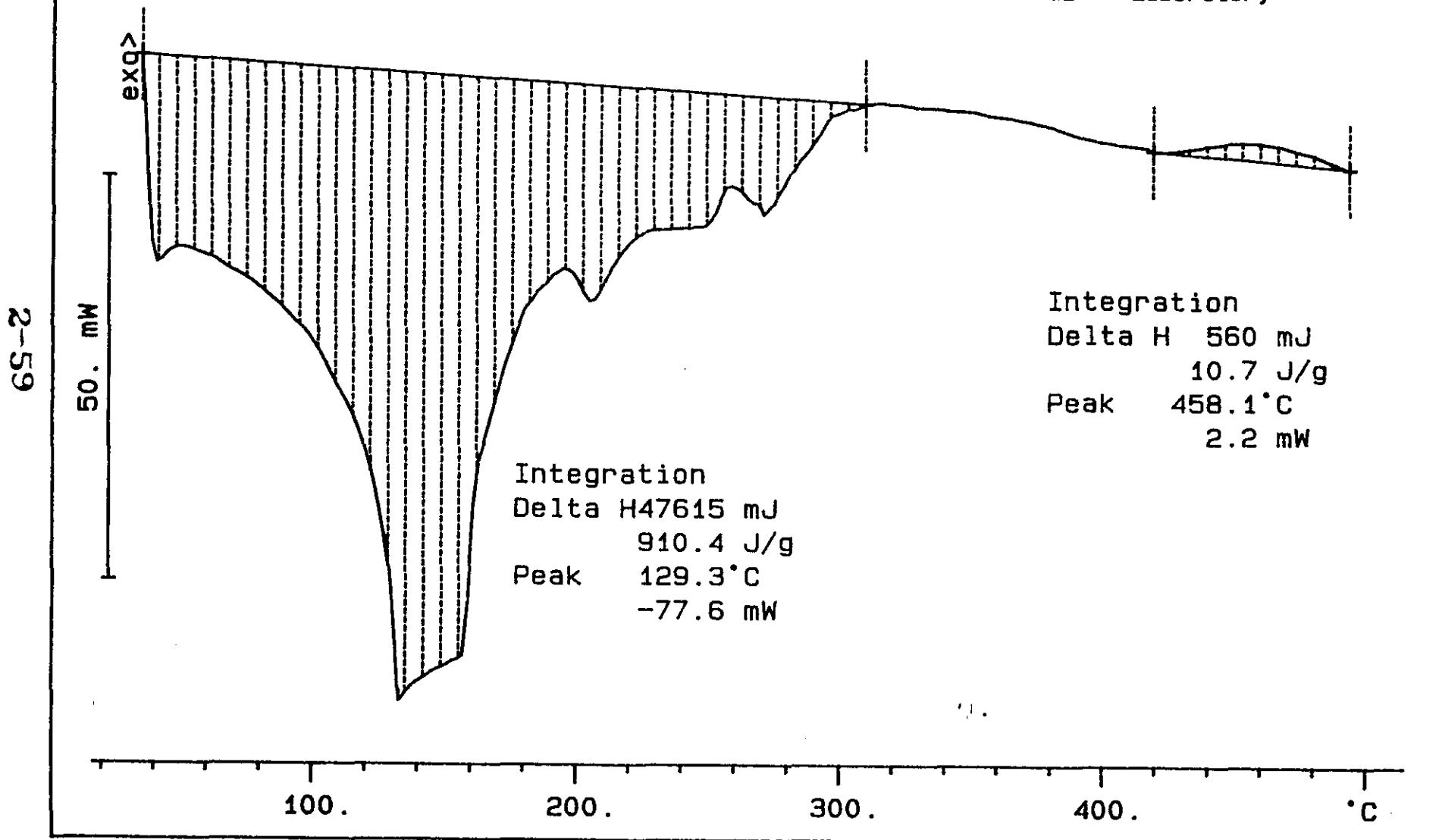


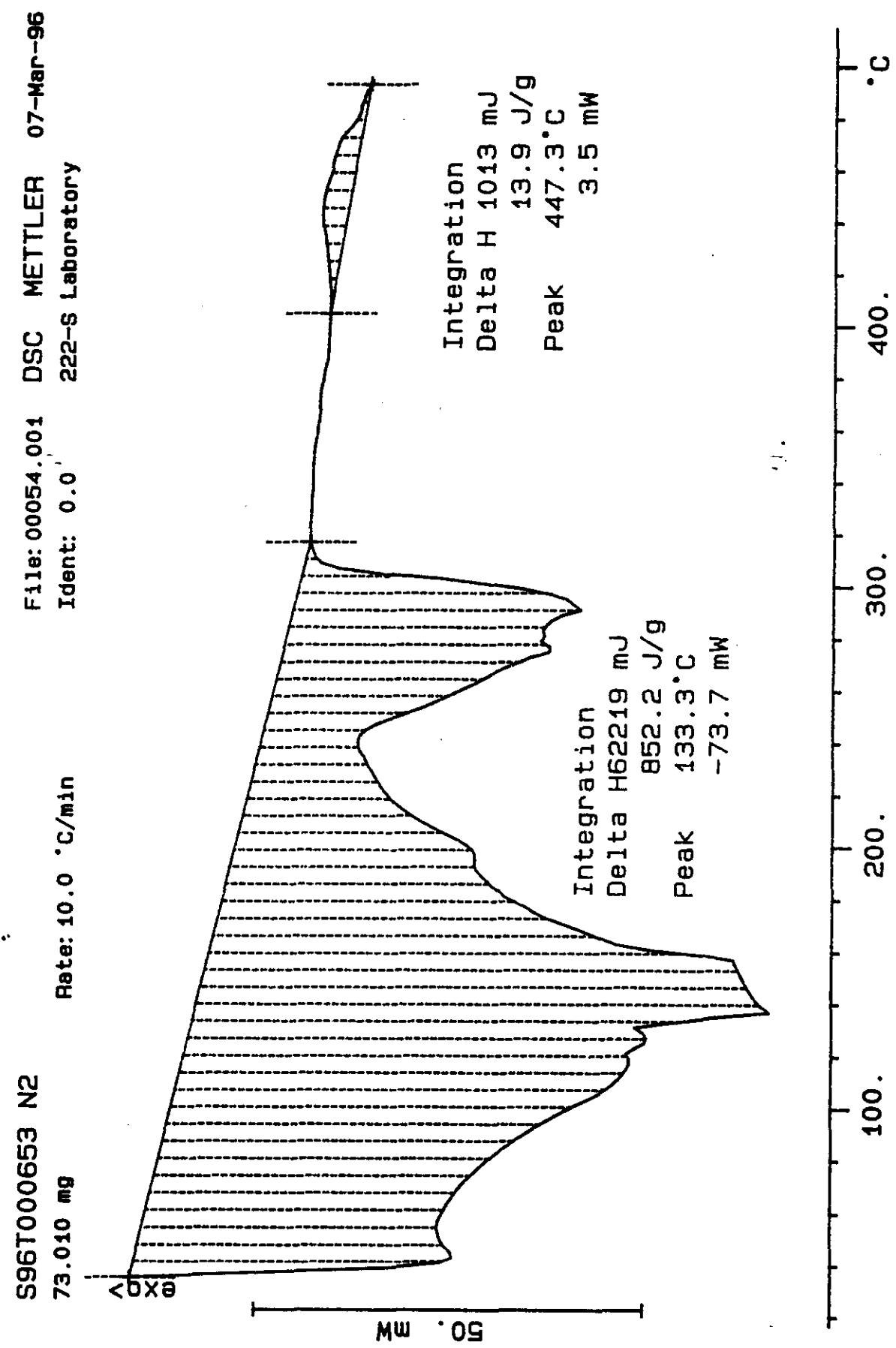
S96T000650DUP N2

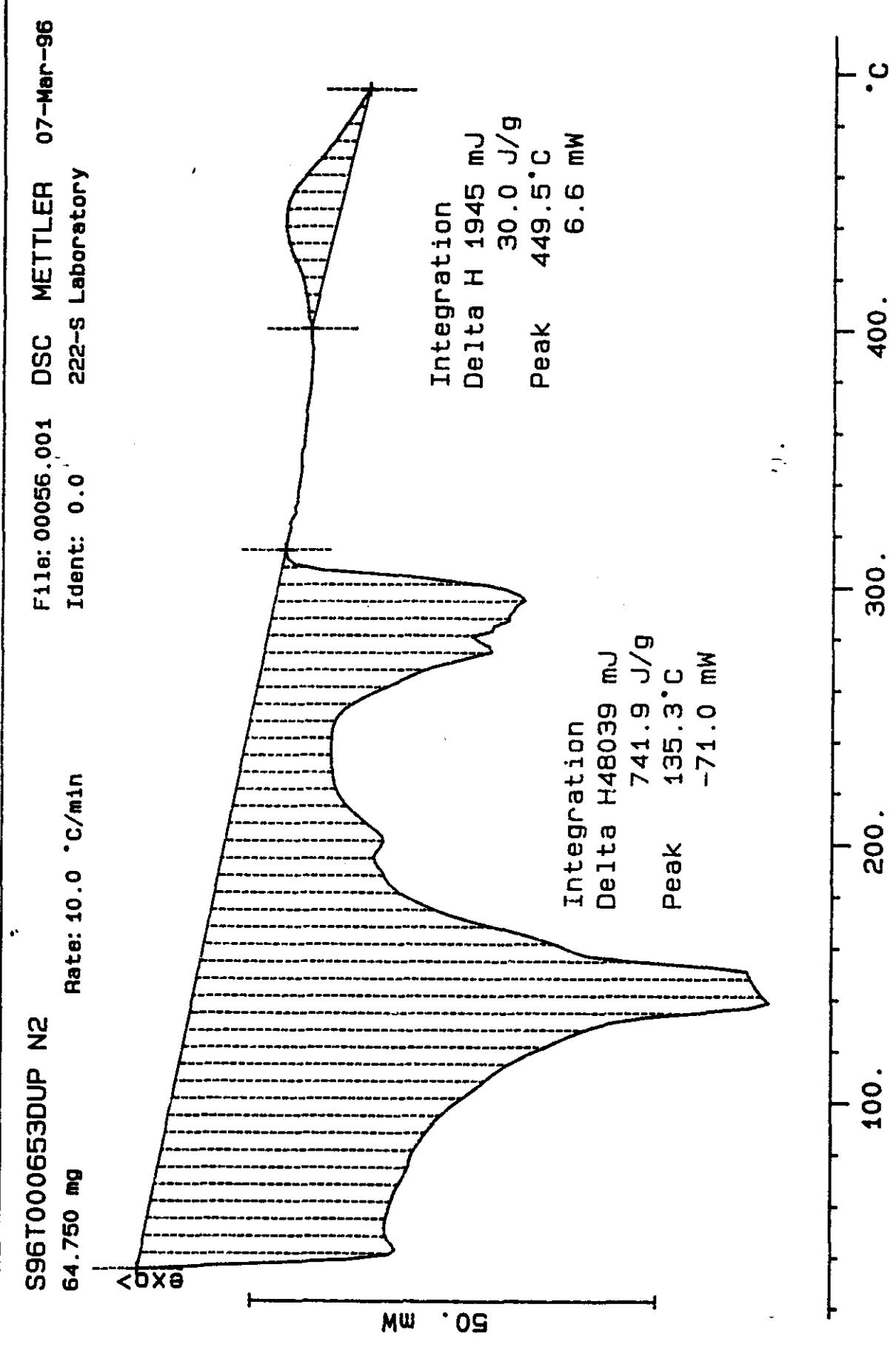
52.300 mg

Rate: 10.0 °C/min

File: 00052.001 DSC METTLER 06-Mar-96
Ident: 0.0 222-S Laboratory







LABCORE Data Entry Template for Worklist#

6035

Analyst: SMF Instrument: DSC0 1 Book # 1ZN14BMethod: LA-514-113 Rev/Mod C-1

Worklist Comment: U-107 DSC-01 RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		DSC-01	SOLID	28.45	30.9*	N/A	Joules/g
96000085	U-107	2 SAMPLE	S96T000683 0	DSC-01	SOLID	N/A	12.4		Joules/g
96000085	U-107	3 DUP.	S96T000683 0	DSC-01	SOLID	12.4	11.4	N/A	Joules/g

Final page for worklist # 6035Susie M. Fuller 3-5-96
Analyst Signature DateLinda Conlin
Analyst Signature DateVerified by Blandina Valenzuela 3/7/96

Data Entry Comments: Sample produced two endotherms, one at 136.3°C with a delta H of 736.7J/g and second at 289.3°C with a delta H of 103.8J/g.

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 263 TO 266

DSC STD 12N14B

15.317 mg

Rate: 10.0 °C/min

File: 00031.001

Ident: 0.0

DSC METTLER

05-Mar-96

222-S Laboratory

<exo

2-63

10. mW

Integration
Delta H 473 mJ
30.9 J/g
Peak 158.8 °C
-27.8 mW

120.

140.

160.

Simultor 3.5-96 °C

WHC-SD-WM-DP-184, REV. 1

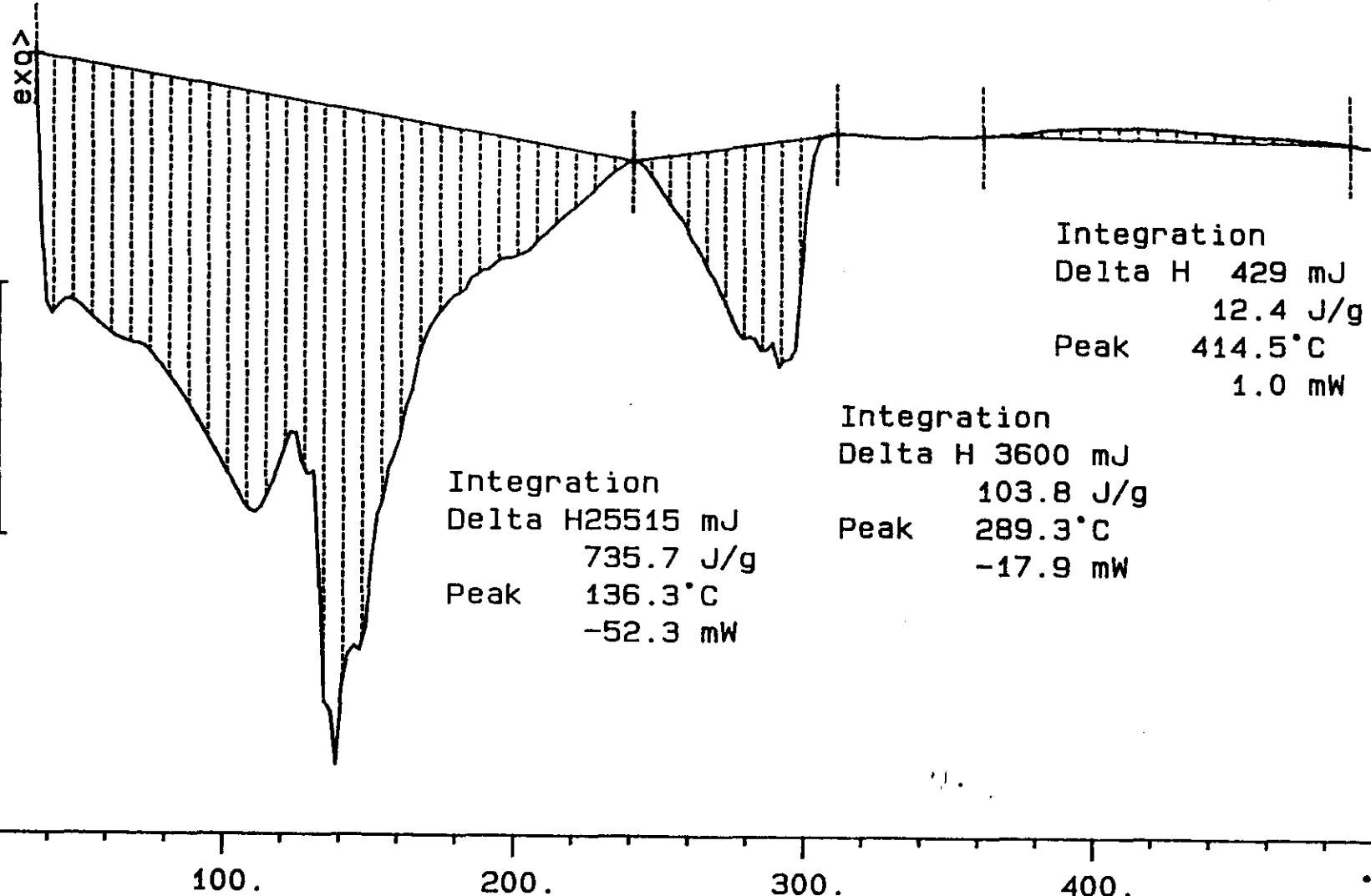
S96T000683 N2

34.681 mg

Rate: 10.0 °C/min

File: 00037.001 DSC METTLER 06-Mar-96
Ident: 0.0 222-S Laboratory

2-64



S96T000683 DUP N2

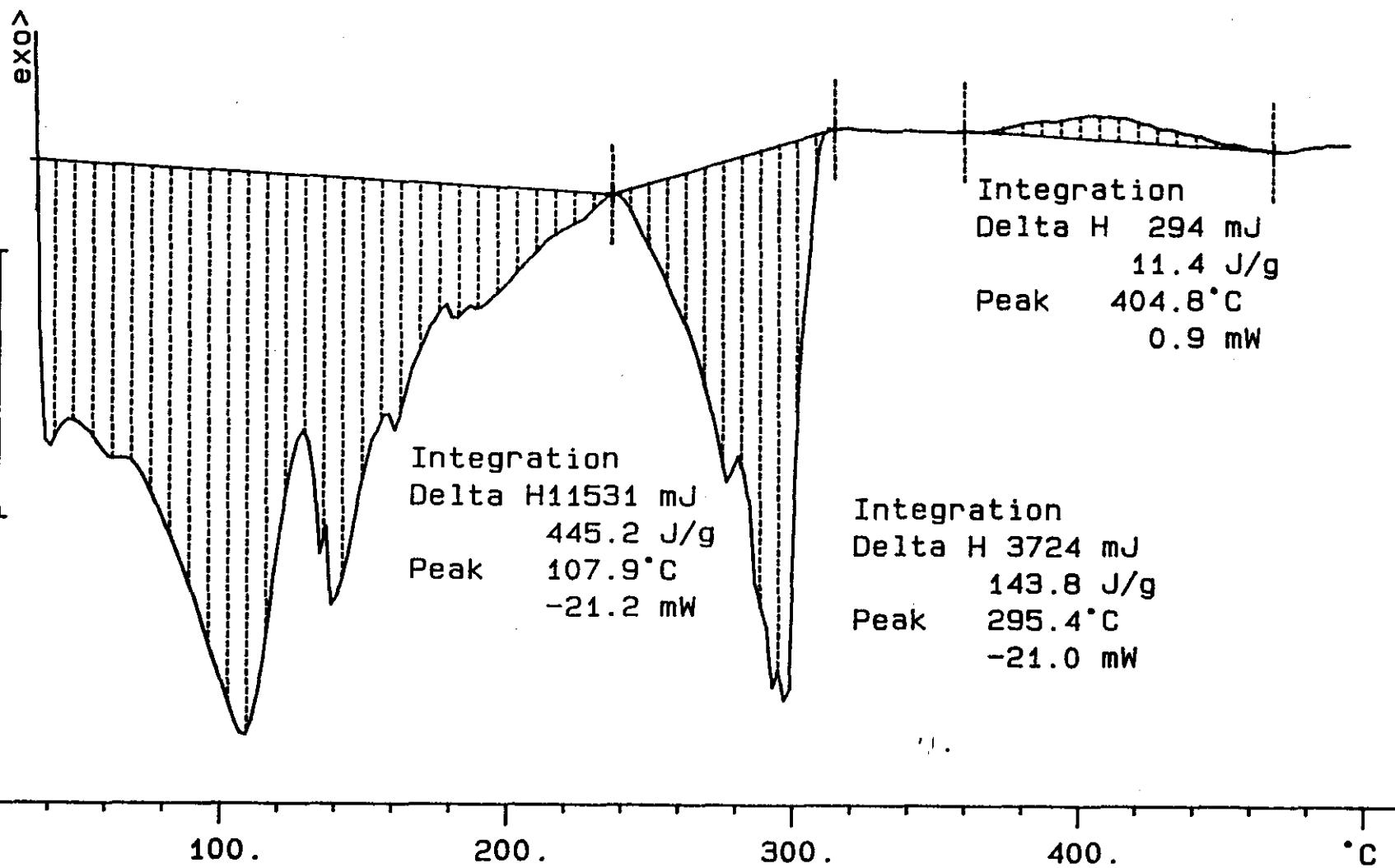
25.901 mg

Rate: 10.0 °C/min

File: 00039.001 DSC METTLER 06-Mar-96

Ident: 0.0 222-S Laboratory

2 - 65



WHC-SD-WM-DP-184, REV. 1

worklistrpt Version 2.1 05/15/95
04/16/96 15:46

Page: 1

LABCORE Data Entry Template for Worklist#**6511**Analyst: SMF Instrument: DSC0 3 Book # 12N14BMethod: LA-514-114 Rev/Mod C-1

Worklist Comment: U-107 DSC RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		DSC-03	SOLID	<u>28.45</u>	<u>27.49*</u>	N/A	Joules/g
96000126	U-107	2 SAMPLE	S96T001055 0	DSC-03	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
96000126	U-107	3 DUP	S96T001055 0	DSC-03	SOLID	<u>Ø</u>	<u>Ø</u>	N/A	Joules/g
96000126	U-107	4 SAMPLE	S96T001056 0	DSC-03	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
96000126	U-107	5 DUP	S96T001056 0	DSC-03	SOLID	<u>Ø</u>	<u>Ø</u>	N/A	Joules/g

Final page for worklist # 6511See attached for signatures

Analyst Signature

Date

4/16/96

Analyst Signature

Date

R+Stef 4/19/96

Verified by
HAnastor 4-22-96

S96T001055 produced two endotherms, one at 109.3°C with a delta H of 211.1 J/g and second at 301.96°C with a delta H of 178.7 J/g.

Data Entry Comments: S96T001056 produced two endotherms, one at 109.0°C with a delta H of 296.4 J/g and second at 290.76°C with a delta H of 91.1 J/g

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WHC-SD-WM-DP-184, REV. 1

worklistrpt Version 2.1 05/15/95
03/14/96 14:32

Page: 1

LABCORE Data Entry Template for Worklist#**6511**Analyst: SMF Instrument: DSC0 Book # 12 N 14 B

Method: LA-514-113 Rev/Mod _____

Worklist Comment: U-107 DSC RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		DSC-01	SOLID			N/A	Joules/g
96000126	U-107	2 SAMPLE	S96T001055 0	DSC-01	SOLID	N/A			Joules/g
96000126	U-107	3 DUP	S96T001055 0	DSC-01	SOLID			N/A	Joules/g
96000126	U-107	4 SAMPLE	S96T001056 0	DSC-01	SOLID	N/A			Joules/g
96000126	U-107	5 DUP	S96T001056 0	DSC-01	SOLID			N/A	Joules/g

Final page for worklist # **6511**Susie M. Fulton 4-15-96

Analyst Signature Date

Analyst Signature Date

Other instrument

Was used
4/16/96
PSW

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Curve 1: DSC

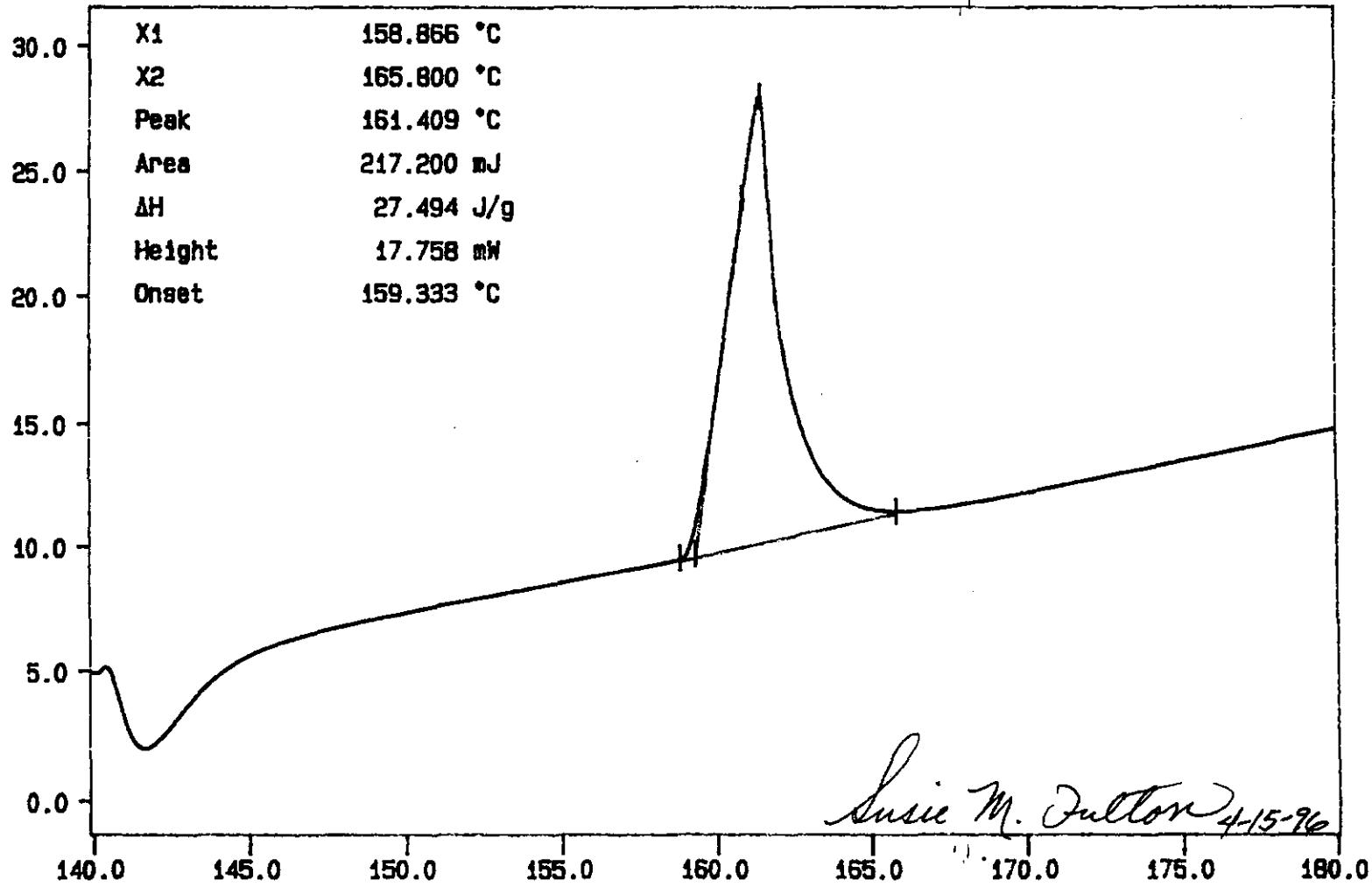
File info: INDO41501 Mon Apr 15 05:53:45 1996

Sample Weight: 7.900 mg

12N14-B INDIUM AT 10C\MIN

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 268 TO 272

2 - 68

N₂, EXOTHERM DOWN

TEMP: 140.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

SM FULTON

PERKIN-ELMER

7 Series Thermal Analysis System

Mon Apr 15 05:54:43 1996

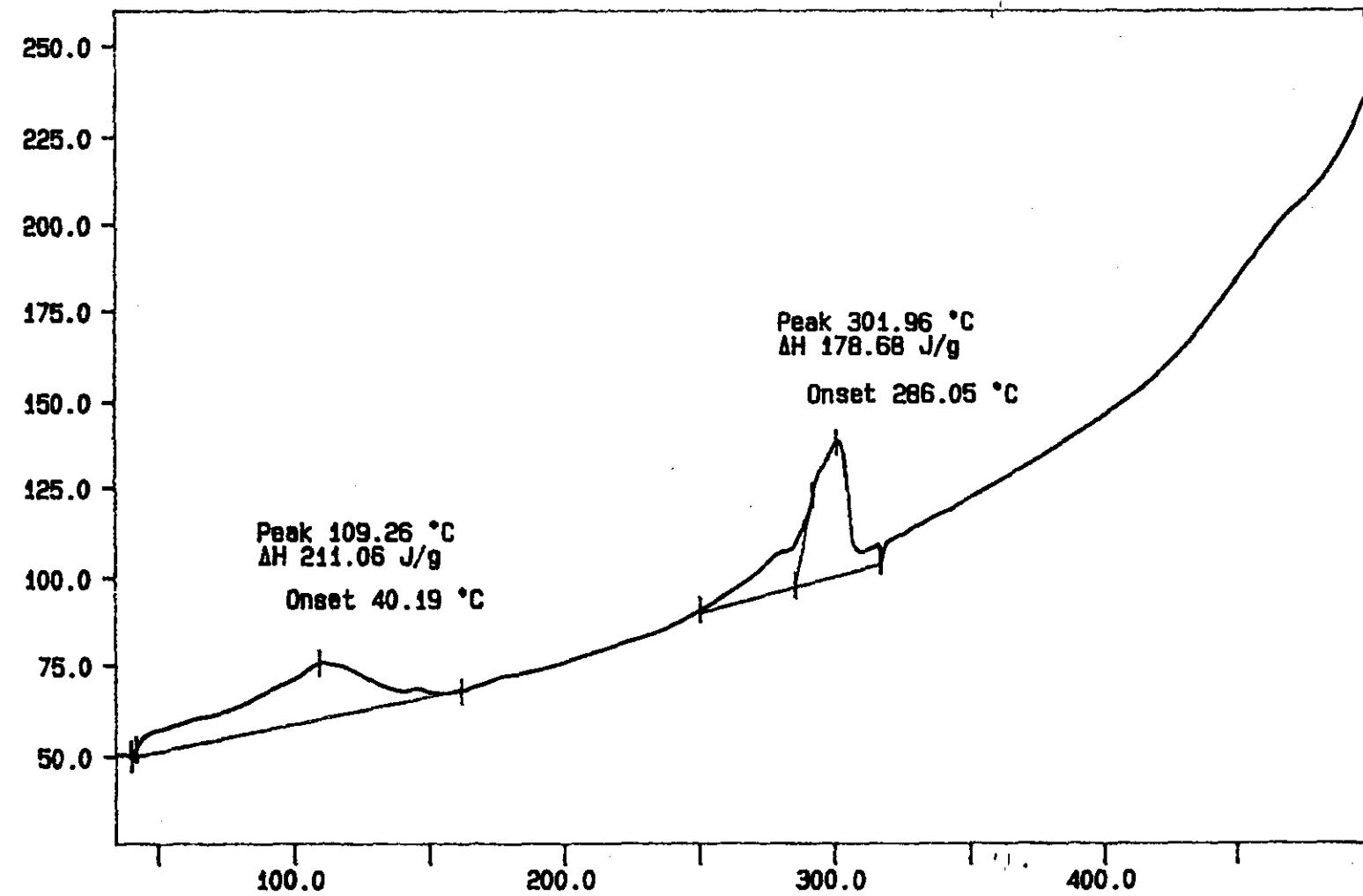
Curve 1: DSC

File info: SAM041504 Mon Apr 15 07:30:07 1996

Sample Weight: 26.740 mg

S96T001055

2-69

exotherm down, N₂ purge gas

TEMP: 30.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Apr 15 08:28:17 1996

018

Curve 1: DSC

File info: SAM041505 Mon Apr 15 09:23:21 1996

Sample Weight: 16.110 mg

S96T001055 DUP

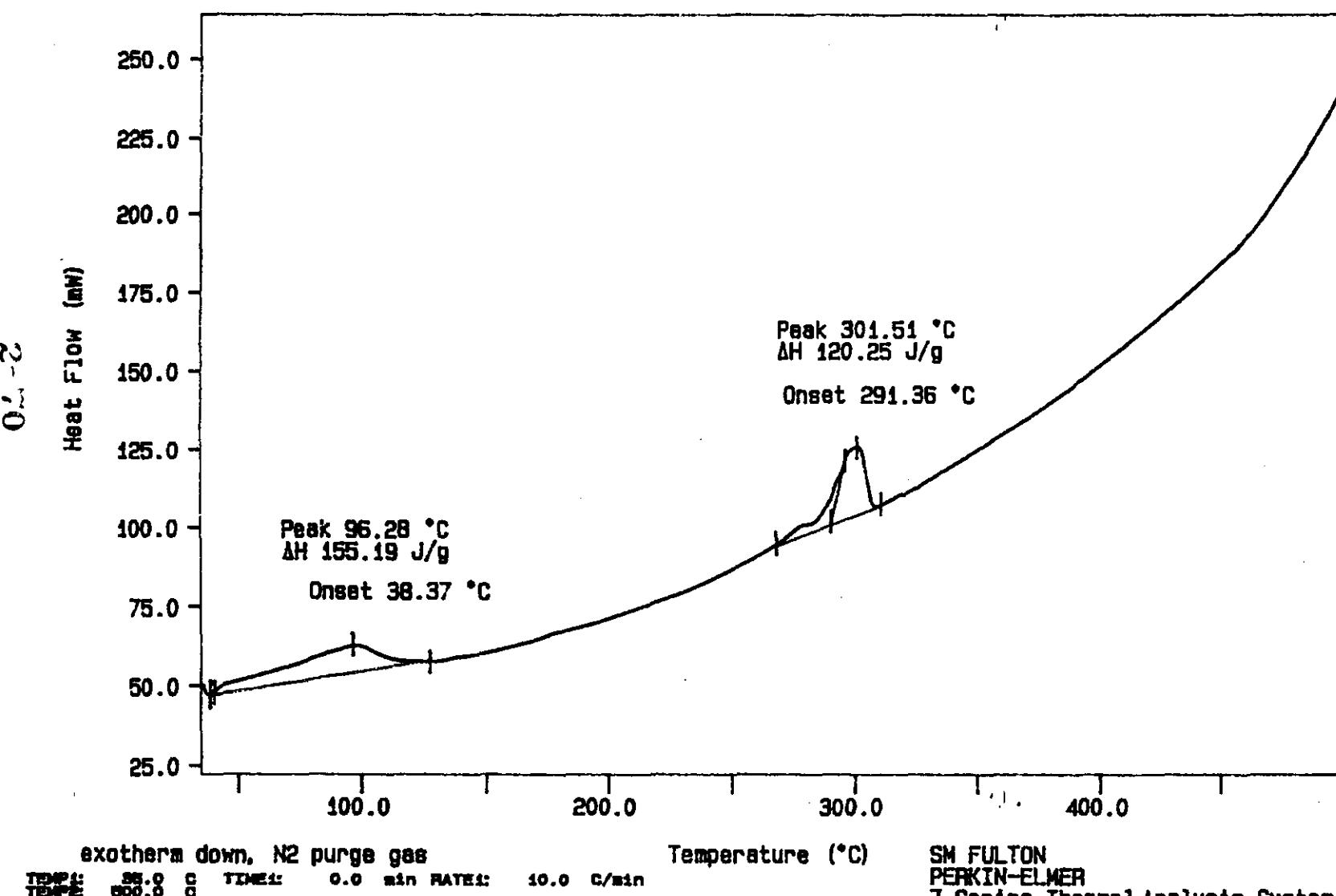
→→ MO-924 200W

WESTINGHOUSE

509 372 2929

11:02

04/18/96



SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Apr 15 12:17:21 1996

WHC-SD-WM-DP-184, REV. 1

Q019

Curve 1: DSC

File info: SAM041506 Mon Apr 15 13:19:28 1996

Sample Weight: 16.800 mg

S96T001056

+++ MO-924 200W

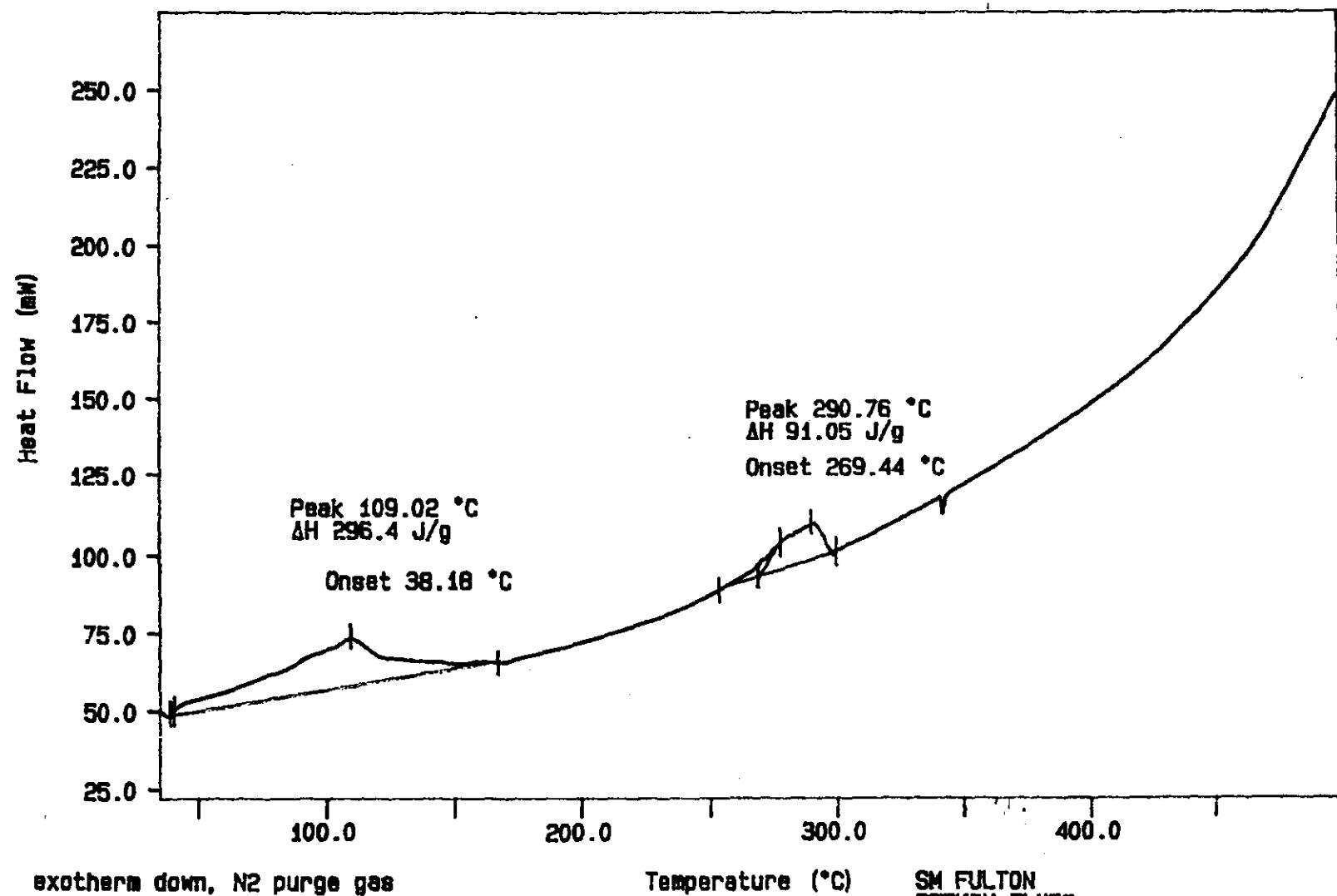
WESTINGHOUSE

509 372 2929

11:02

04/18/96

2-7-1



exotherm down, N₂ purge gas
TEMP: 38.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Apr 15 13:29:26 1996

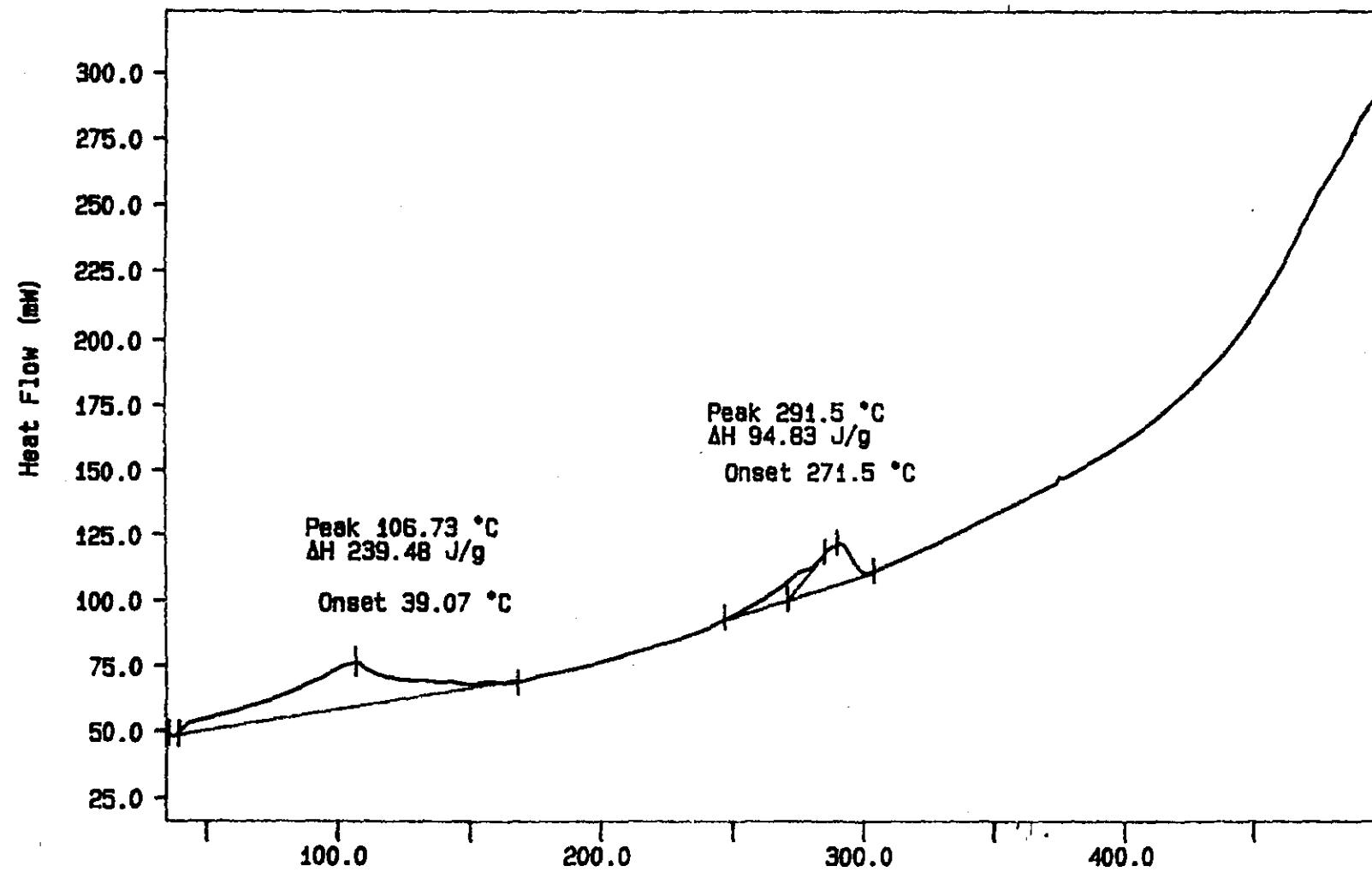
WHC-SD-WM-DP-184, REV. 1

Curve 1: DSC

File info: SAM041507 Mon Apr 15 14:36:33 1996

Sample Weight: 22.080 mg

S96T001056 DUP

exotherm down, N₂ purge gas

TEMP: 35.0 °C TIMES: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

SM FULTON

PERKIN-ELMER

7 Series Thermal Analysis System
Mon Apr 15 15:36:48 1996

WHC-SD-WM-DP-184, REV. 1

worldisrupt Version 2.1 05/15/95
04/17/96 11:51

Page: 1

LABCORE Data Entry Template for Worklist#

6512

Analyst: JDS Instrument: DSC0 Book # 12N14BMethod: LA-514-113 Rev/Mod C-1

Worklist Comment: U-107 DSC RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		DSC-01	SOLID	<u>28.45</u>	<u>27.0</u>	<u>N/A</u>	Joules/g
96000126	U-107	2 SAMPLE	S96T001057 0	DSC-01	SOLID	<u>N/A</u>	<u>147.0</u>		Joules/g
96000126	U-107	3 DUP	S96T001057 0	DSC-01	SOLID	<u>147.0</u>	<u>148.0</u>	<u>N/A</u>	Joules/g
96000126	U-107	4-SAMPLE	S96T001058 0	DSC-01	SOLID	<u>N/A</u>	<u>11.5</u>		Joules/g
96000126	U-107	5 DUP	S96T001058 0	DSC-01	SOLID	<u>11.5</u>	<u>79.7</u>	<u>N/A</u>	Joules/g
96000126	U-107	6 TRIP	S96T001058 0	DSC-01	SOLID	<u>11.5</u>	<u>24.9</u>	<u>N/A</u>	Joules/g

Final page for worklist # 6512See attached for signaturesAnalyst Signature Date 4/17/96Tony Hammill 4-18-96
Analyst Signature DateVerified by Blandina Valenzuela
4-22-96

Data Entry Comments: S96T001057 produced an endotherm at 114.5°C with a delta H of 994.1 J/g.

S96T001058 produced two endotherms, one at 97.3°C with a delta H of 972.3 J/g and second at 270.5°C with a delta H of 25.7 J/g.

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

The triplicate was run because the thermograms did not look alike. The dup and trip did not have two endotherms.

2-73

WHC-SD-WM-DP-184, REV. 1

worklistrpt Version 2.1 05/15/95
03/14/96 14:34

Page: 1

LABCORE Data Entry Template for Worklist#**6512**Analyst: Jas Instrument: DSC0 Book # 12N/40

Method: LA-514-113 Rev/Mod _____

Worklist Comment: U-107 DSC RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		DSC-01	SOLID			N/A	Joules/g
96000126	U-107	2 SAMPLE	S96T001057 0	DSC-01	SOLID	N/A			Joules/g
96000126	U-107	3 DUP	S96T001057 0	DSC-01	SOLID			N/A	Joules/g
96000126	U-107	4 SAMPLE	S96T001058 0	DSC-01	SOLID	N/A			Joules/g
96000126	U-107	5 DUP	S96T001058 0	DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 6512Jah Sp 4/17/96
Analyst Signature Date

Analyst Signature Date

Data Entry Comments:

Ran a Trip on S96T001058

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

2-74

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 275 TO 280.

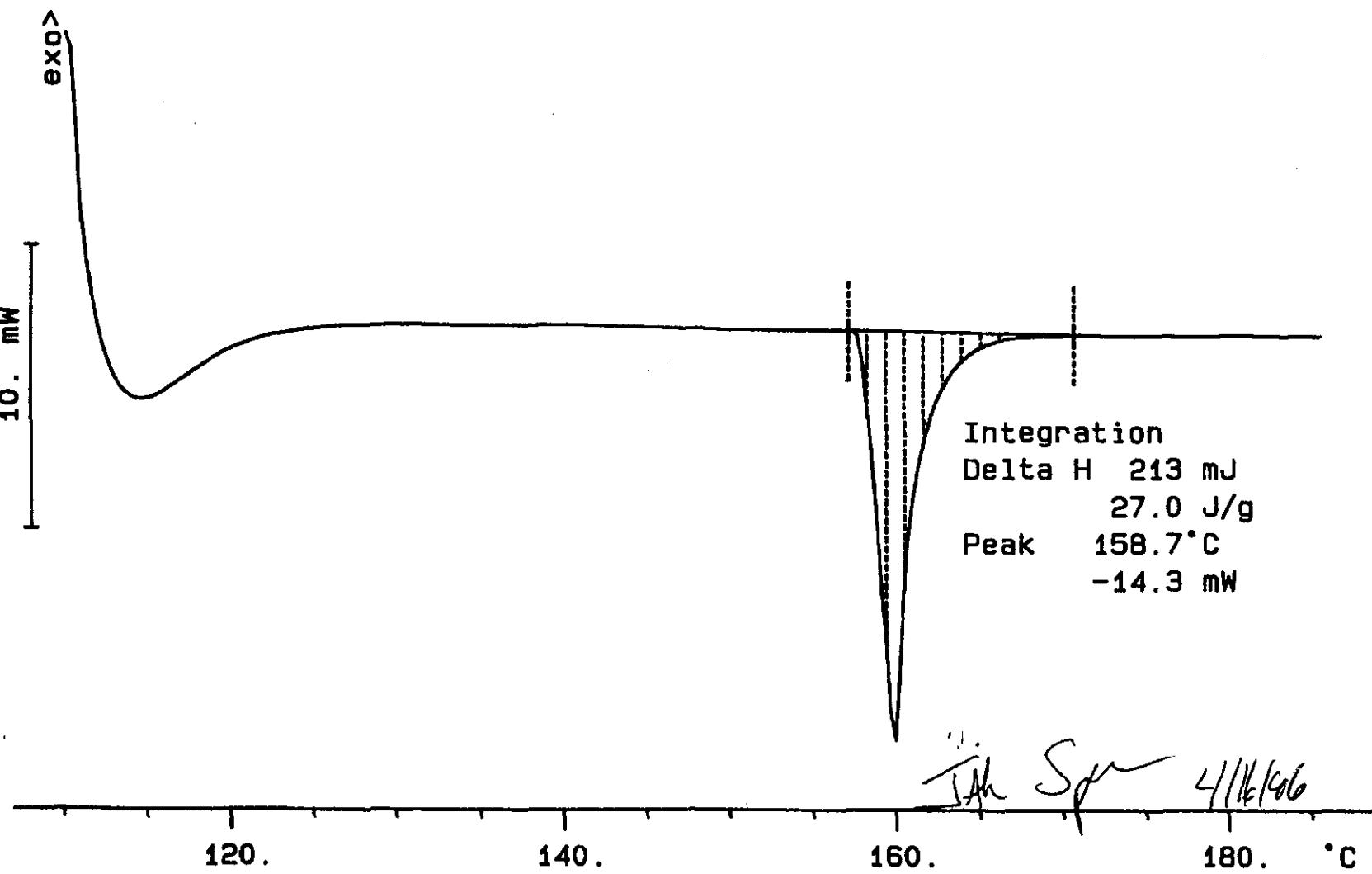
DSC STD 12N14B

7.900 mg

Rate: 10.0 °C/min

File: 00042.001 DSC METTLER 16-Apr-96

Ident: 0.0 222-S Laboratory



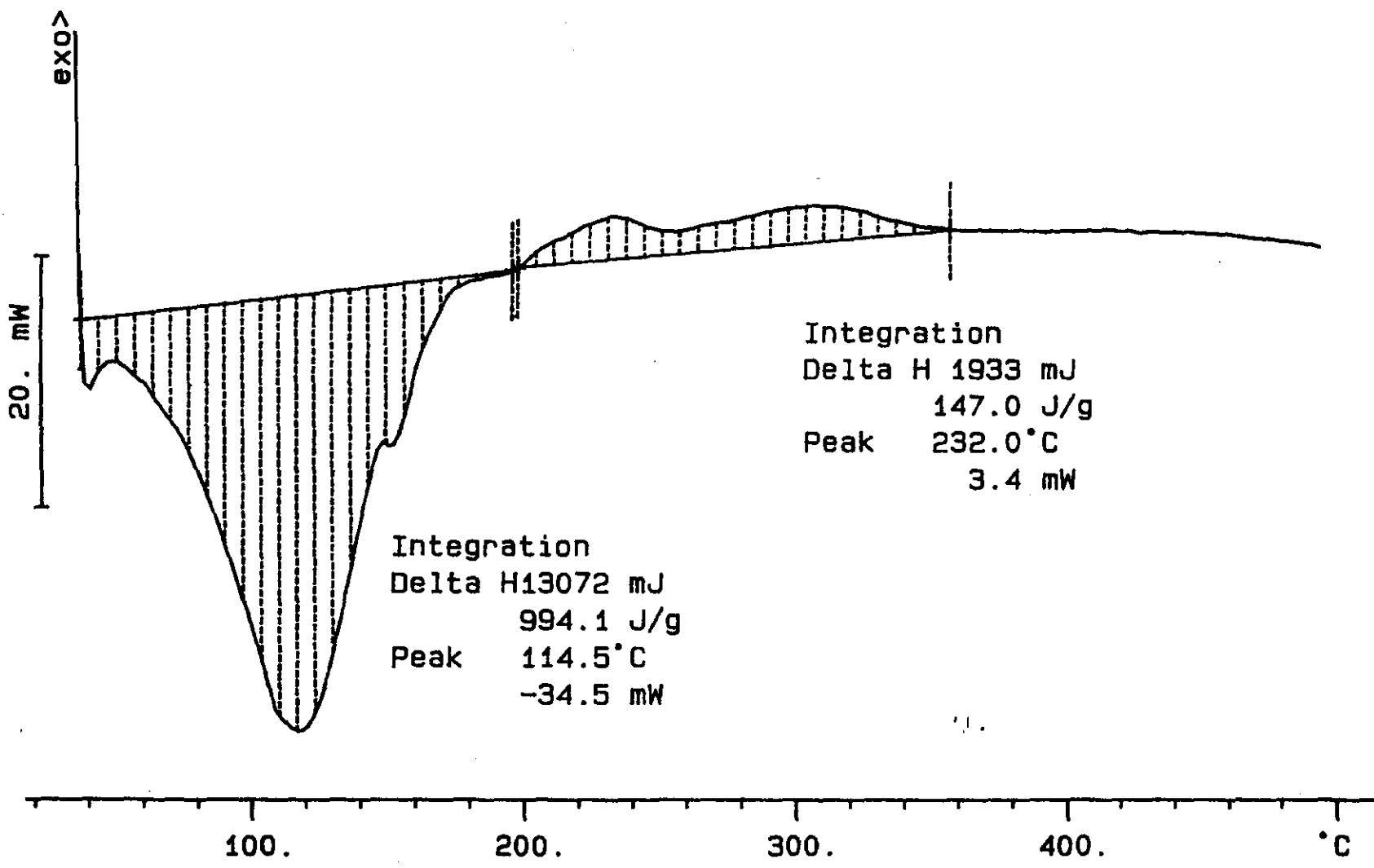
S96T001057 N2

13.150 mg

Rate: 10.0 °C/min

File: 00051.001 DSC METTLER 16-Apr-96

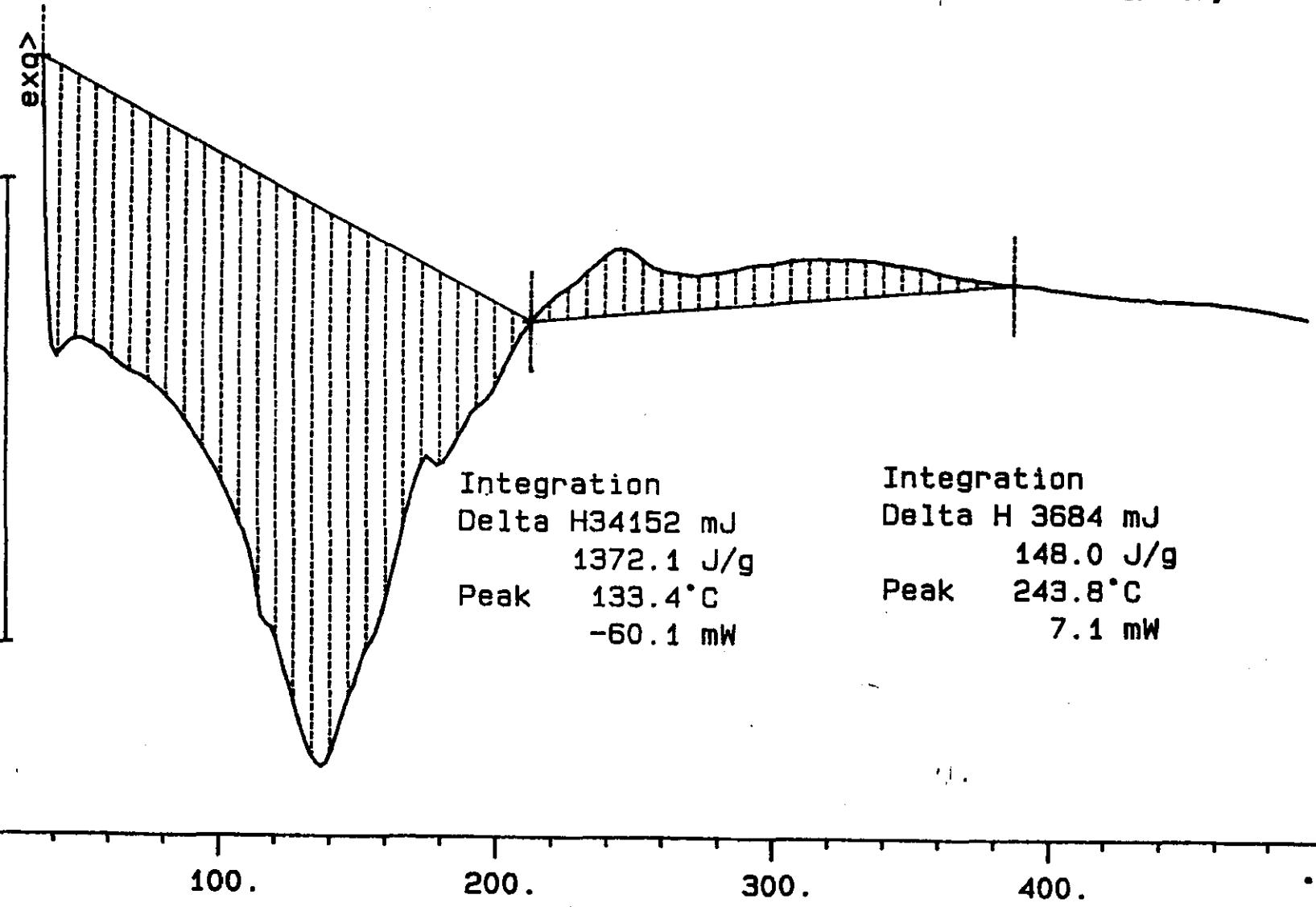
Ident: 0.0 222-S Laboratory

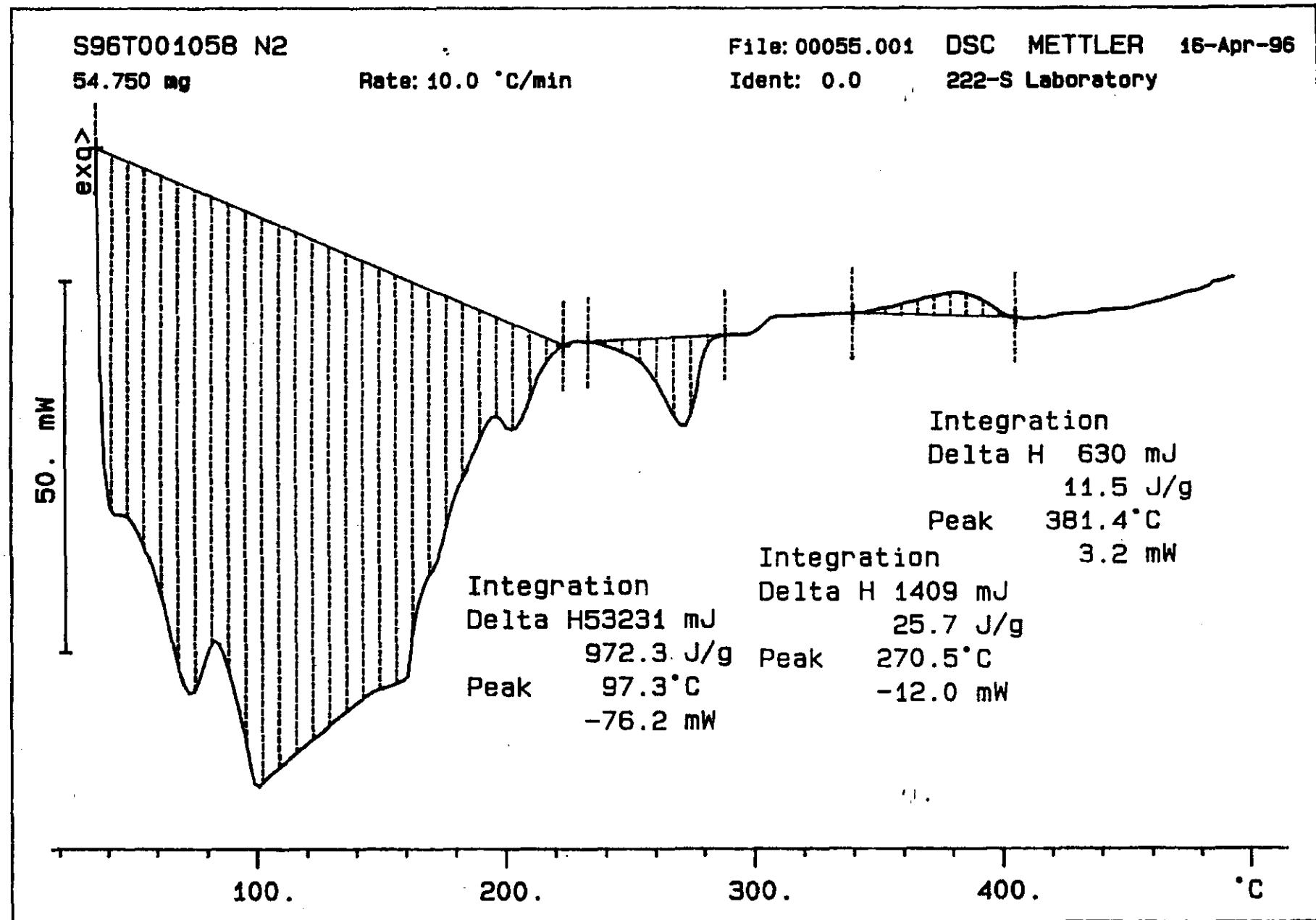


S96T001057DUP N2

24.890 mg

Rate: 10.0 °C/min

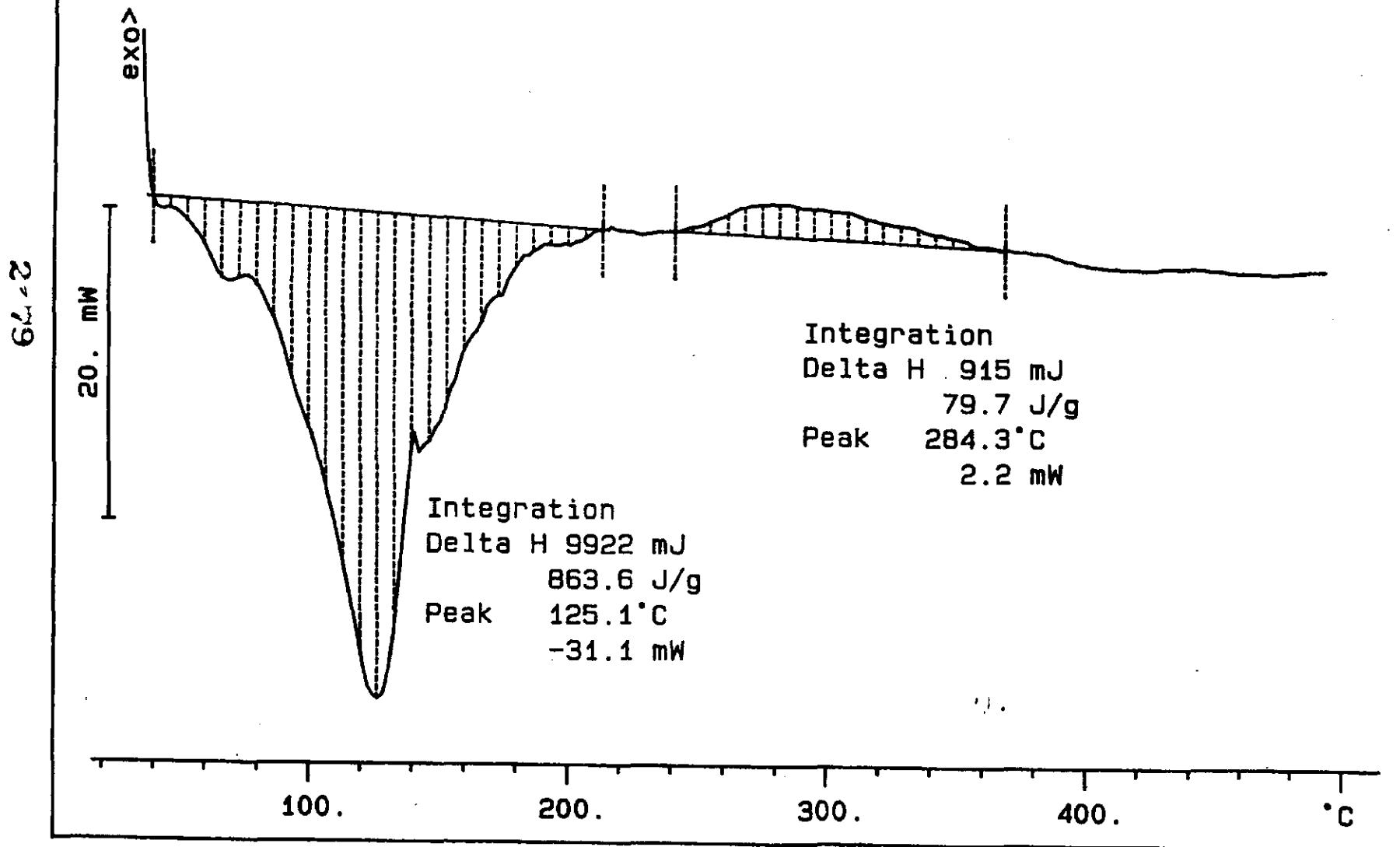
File: 00053.001 DSC METTLER 16-Apr-96
Ident: 0.0 222-S Laboratory



S96T001058DUP N2

11.490 mg

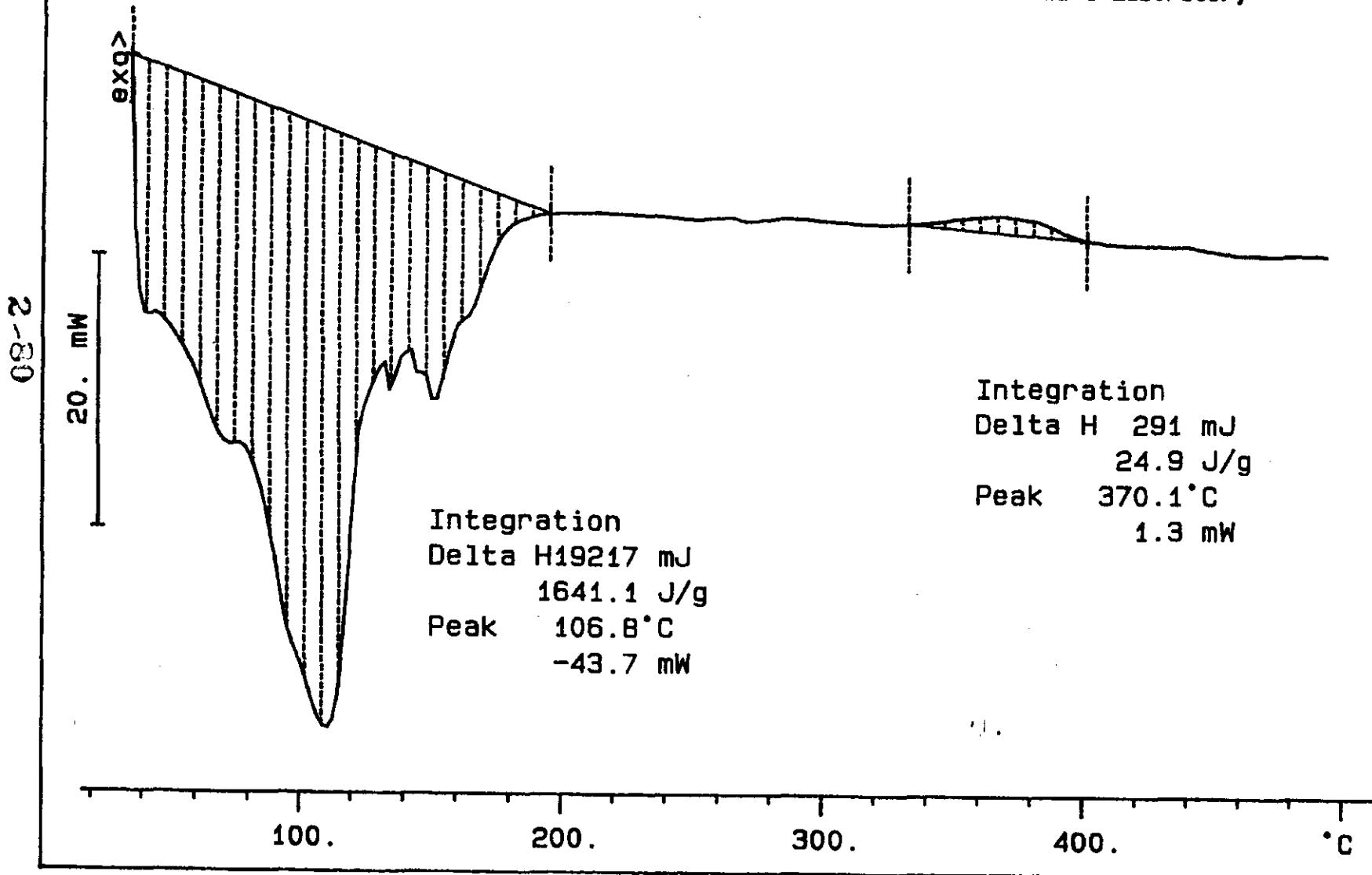
Rate: 10.0 °C/min

File: 00057.001 DSC METTLER 17-Apr-96
Ident: 0.0 222-S Laboratory

S96T001058 TRP N2

11.710 mg

Rate: 10.0 °C/min

File: 00059.001 DSC METTLER 17-Apr-96
Ident: 0.0 222-S Laboratory

LABCORE Data Entry Template for Worklist#

6515

Analyst: SMF Instrument: DSC0 1 Book # 12N14BMethod: LA-514-113 Rev/Mod C-1

Worklist Comment: U-107 DSC RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		DSC-01	SOLID	<u>28.45</u>	<u>30.2</u>	N/A	Joules/g
96000126	U-107	2 SAMPLE	S96T001064	0	DSC-01	N/A	Ø		Joules/g
96000126	U-107	3 DUP	S96T001064	0	DSC-01	Ø	Ø	N/A	Joules/g
96000126	U-107	4 SAMPLE	S96T001065	0	DSC-01	N/A	Ø		Joules/g
96000126	U-107	5 DUP	S96T001065	0	DSC-01	Ø	Ø	N/A	Joules/g

Final page for worklist # **6515**Susie M. Fulton 3-18-96
Analyst Signature Date 1500Linda Coulom 3/23/96
Analyst Signature DateVerified by Blandina Valenzuela 3/25/96

S96T001064 produced a large endotherm at 139.3°C with a delta H with ^{311.96} ₀₀₁ of 768.0 J/g.

Data Entry Comments: S96T001065 produced two endotherms one at 111.3°C with a delta H of 894.4 J/g and second at 262.3°C with a delta H of 41.3 J/g.

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 289 TO 286.

DSC STD 12N14B

10.800 mg

Rate: 10.0 °C/min

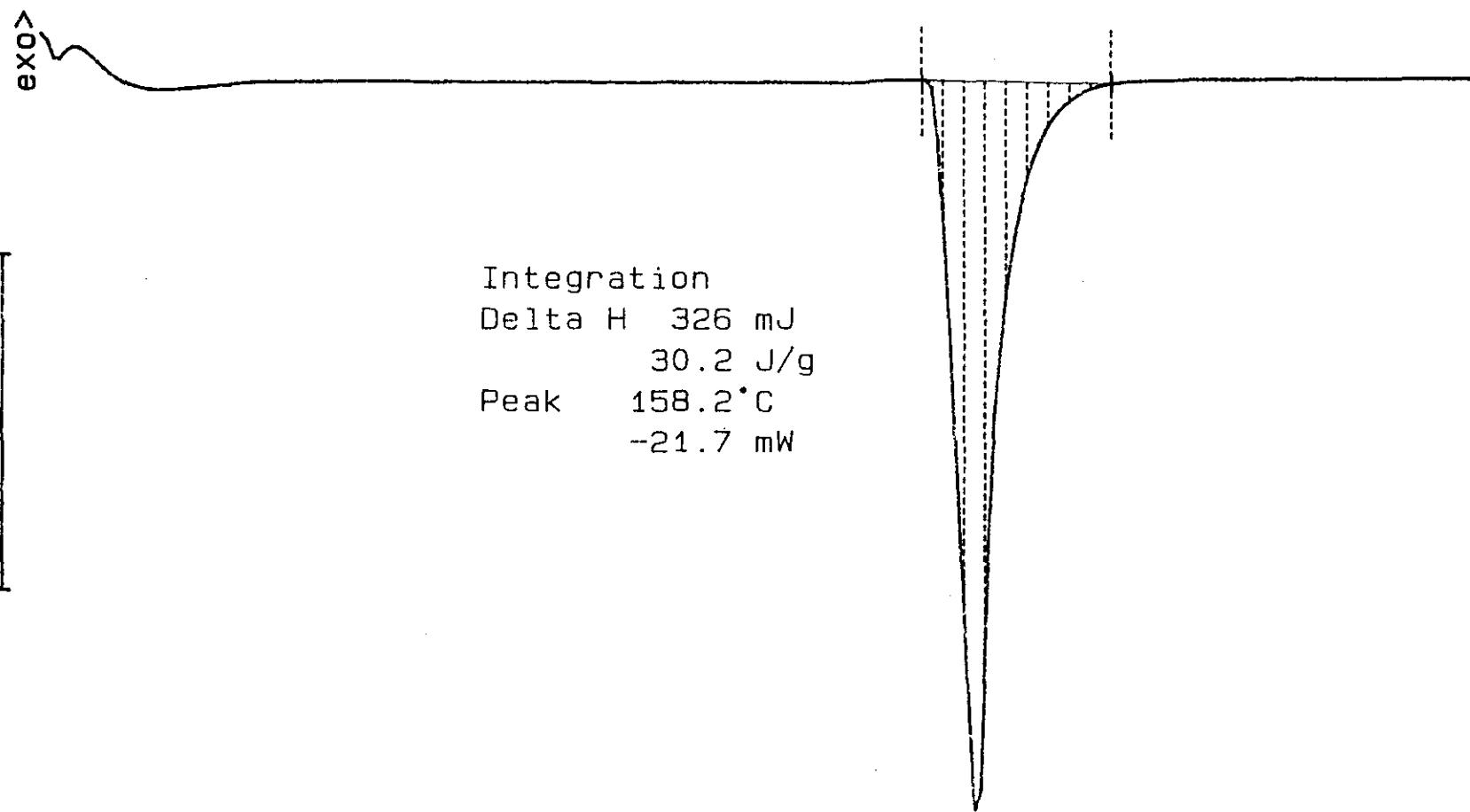
File: 00026.001

DSC METTLER

18-Mar-96

Ident: 0.0

222-S Laboratory



120.

140.

160.

180.

°C

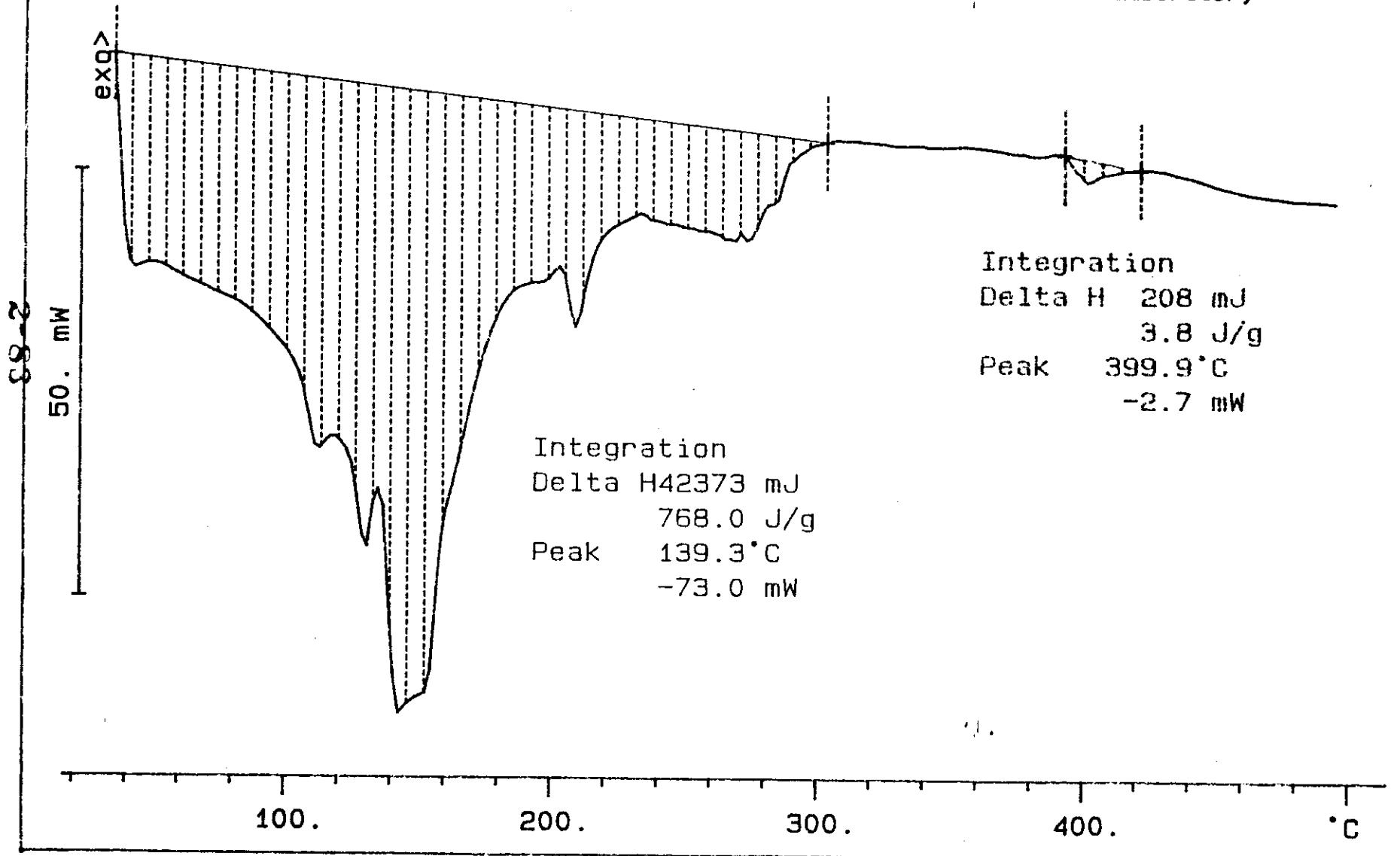
Laurie M. Julian 3-18-96

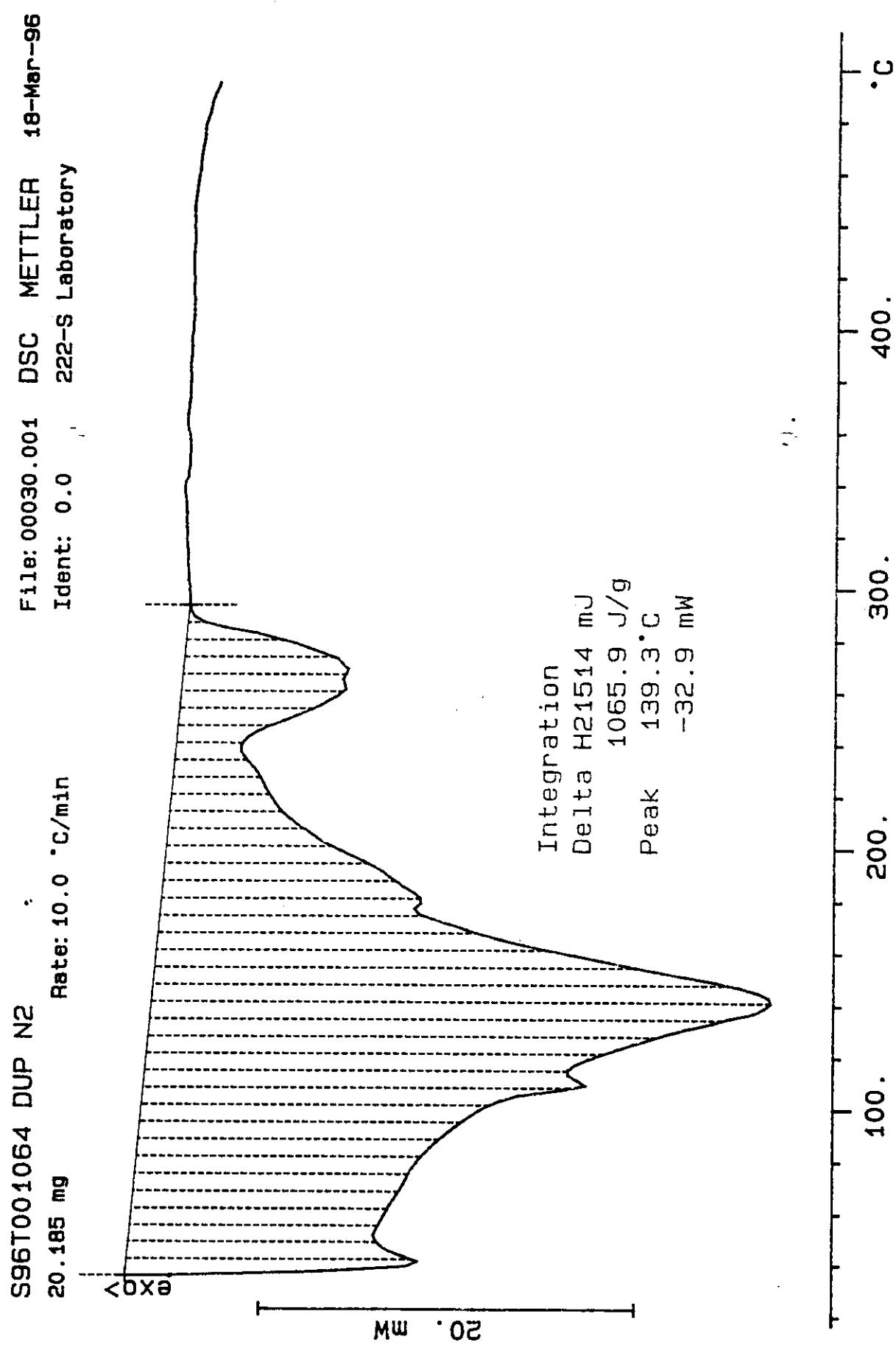
S96T001064 N2

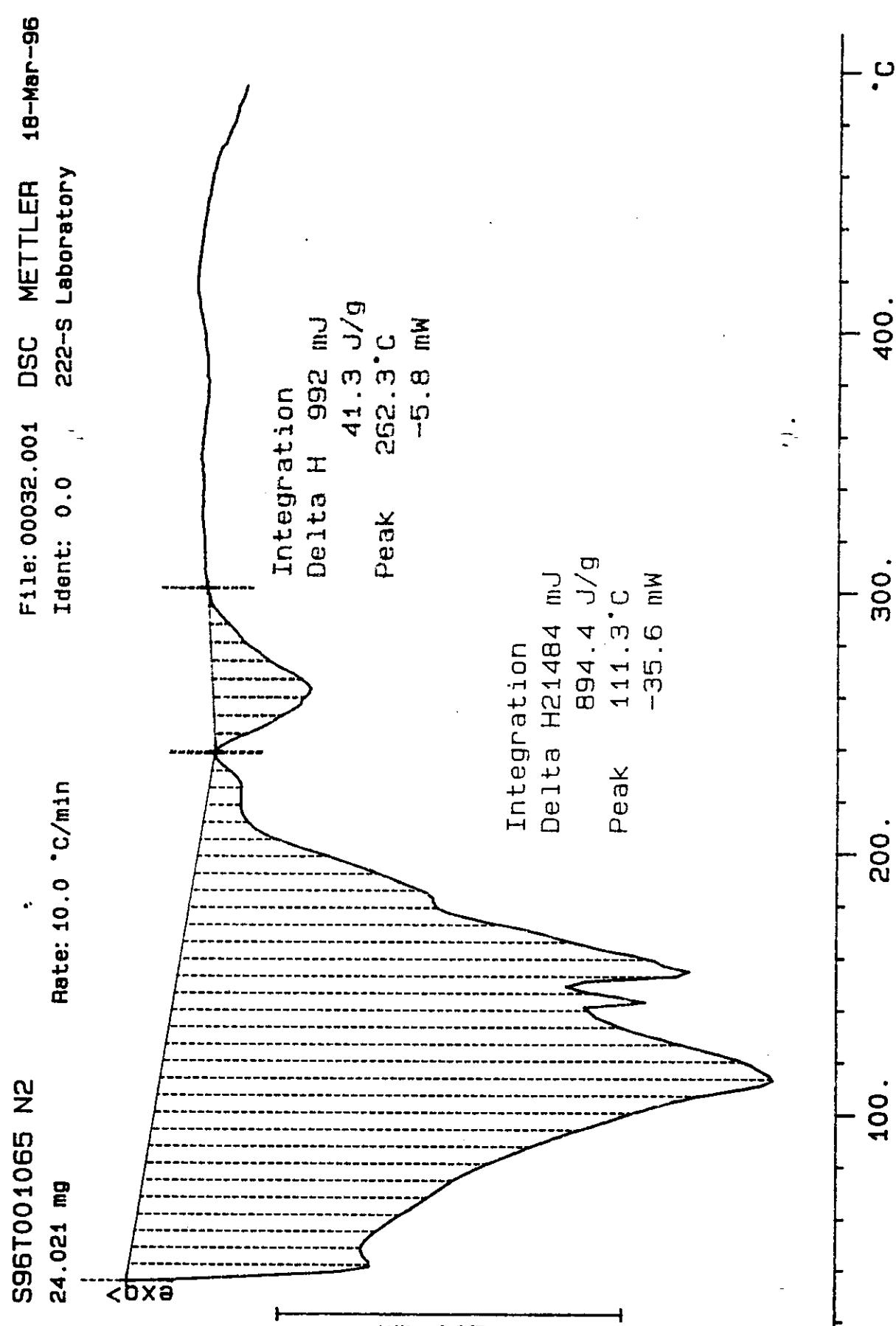
55.171 mg

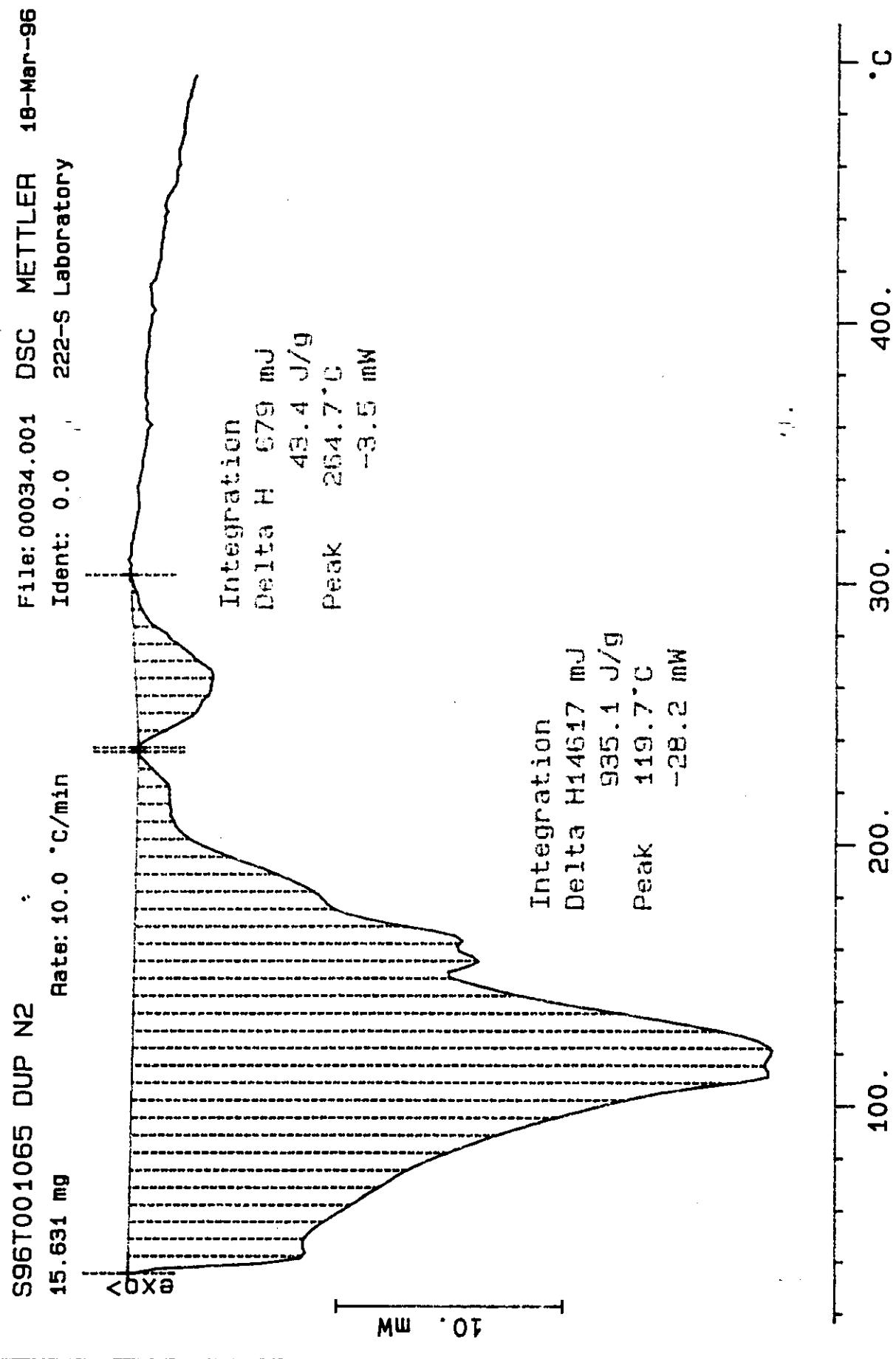
Rate: 10.0 °C/min

File: 00028.001 DSC METTLER 18-Mar-96
Ident: 0.0 222-S Laboratory









worklistrpt Version 2.1 05/15/95
04/23/96 09:36

WHC-SD-WM-DP-184, REV. 1

Page: 1

LABCORE Data Entry Template for Worklist#

6516Analyst: SMF Instrument: DSC0 3 Book # 12N14BMethod: LA-514-114 Rev/Mod C-1

Worklist Comment: U-107 DSC RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		DSC-03	SOLID	<u>28.45</u>	<u>26.68</u>	N/A	Joules/g
96000126	U-107	2 SAMPLE	S96T001068 0	DSC-03	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
96000126	U-107	3 DUP	S96T001068 0	DSC-03	SOLID	<u>Ø</u>	<u>Ø</u>	N/A	Joules/g
		4 STD		DSC-03	SOLID	<u>28.45</u>	<u>26.42</u>	N/A	Joules/g
96000085	U-107	5 SAMPLE	S96T001143 0	DSC-03	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
96000085	U-107	6 DUP	S96T001143 0	DSC-03	SOLID	<u>Ø</u>	<u>Ø</u>	N/A	Joules/g
96000085	U-107	7 TRIP	S96T001143 0	DSC-03	SOLID	<u>Ø</u>	<u>Ø</u>	N/A	Joules/g

Final page for worklist # **6516**

See attached for signatures

Analyst Signature Date 4/23/96

Analyst Signature Date

Verified by Blandina Valenzuela
4/29/96

S96T001068 produced one large endotherm at 135.99°C with a delta H of 1218.6 J/g.

Data Entry Comments: S96T001143 produced two endotherms one at 101.99°C with a delta H of 141.82 J/g and second at 304.95°C with a delta H of 134.18 J/g. The ΔH was recalculated to include the correct sample weight.

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

4/29/96

WHC-SD-WM-DP-184, REV. 1

worklistrpt Version 2.1 05/15/95
03/14/96 14:40

Page: 1

LABCORE Data Entry Template for Worklist#**6516**Analyst: SMF Instrument: DSC0 Book # 1ZN14B

Method: LA-514-113 Rev/Mod _____

Worklist Comment: U-107 DSC RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		DSC-01	SOLID			N/A	Joules/g
96000126	U-107	2 SAMPLE	S96T001068 0	DSC-01	SOLID	N/A			Joules/g
96000126	U-107	3 DUP	S96T001068 0	DSC-01	SOLID			N/A	Joules/g
96000085	U-107	4 SAMPLE	S96T001143 0	DSC-01	SOLID	N/A			Joules/g
96000085	U-107	5 DUP	S96T001143 0	DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 6516Susie M. Fulton 4-17-96

Analyst Signature Date

RJ McCown 4/17/96TC Wright 4/22/96

Analyst Signature Date

Data Entry Comments:

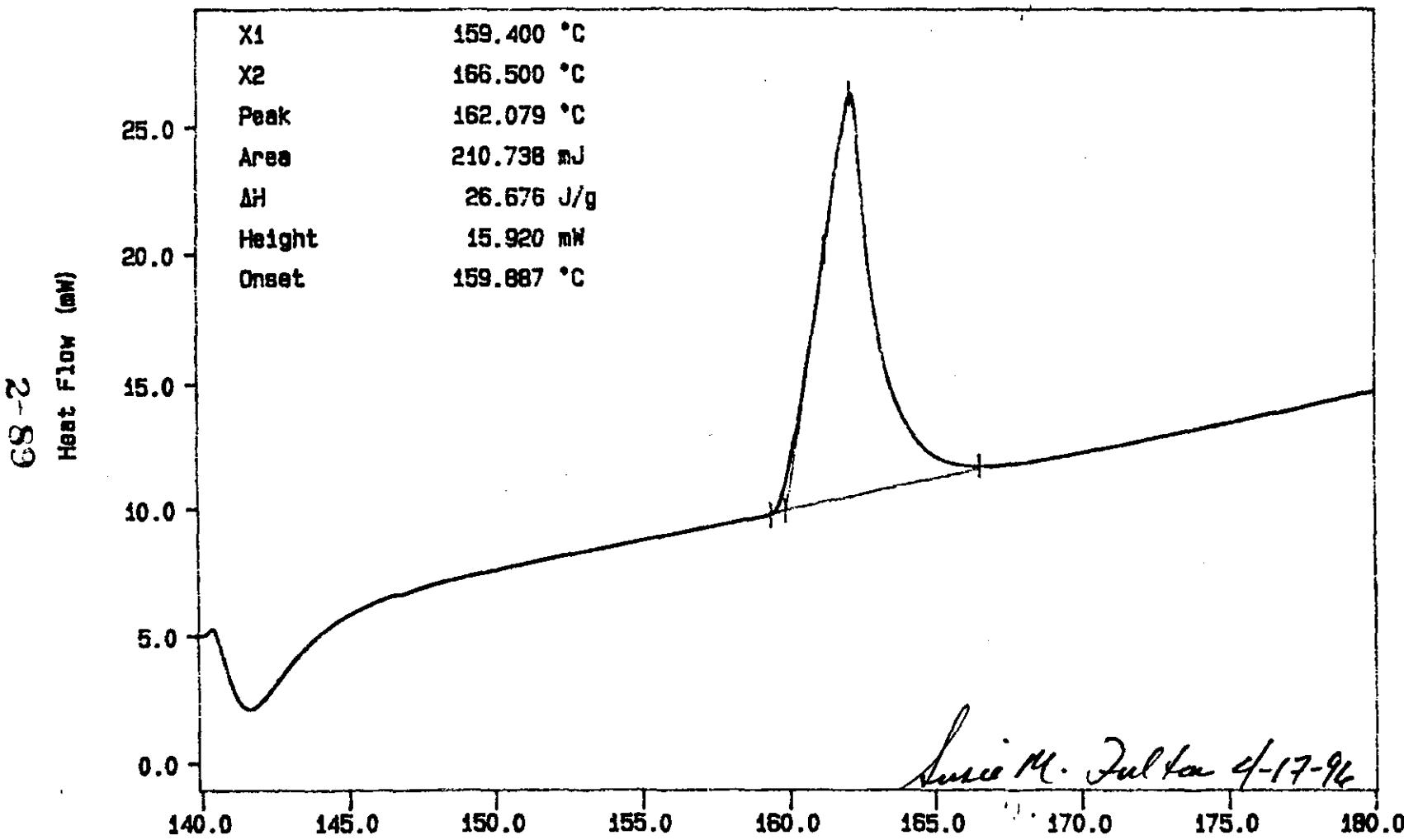
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Curve 1: DSC

File info: INDO41701 Wed Apr 17 06:57:58 1996

Sample Weight: 7.900 mg

12N14-B INDIUM AT 10C\MIN

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 288 TO 295N₂, EXOTHERM DOWN

TEMP1: 140.0 °C TIMES: 0.0 min RATE1: 10.0 °C/min

Temperature (°C)

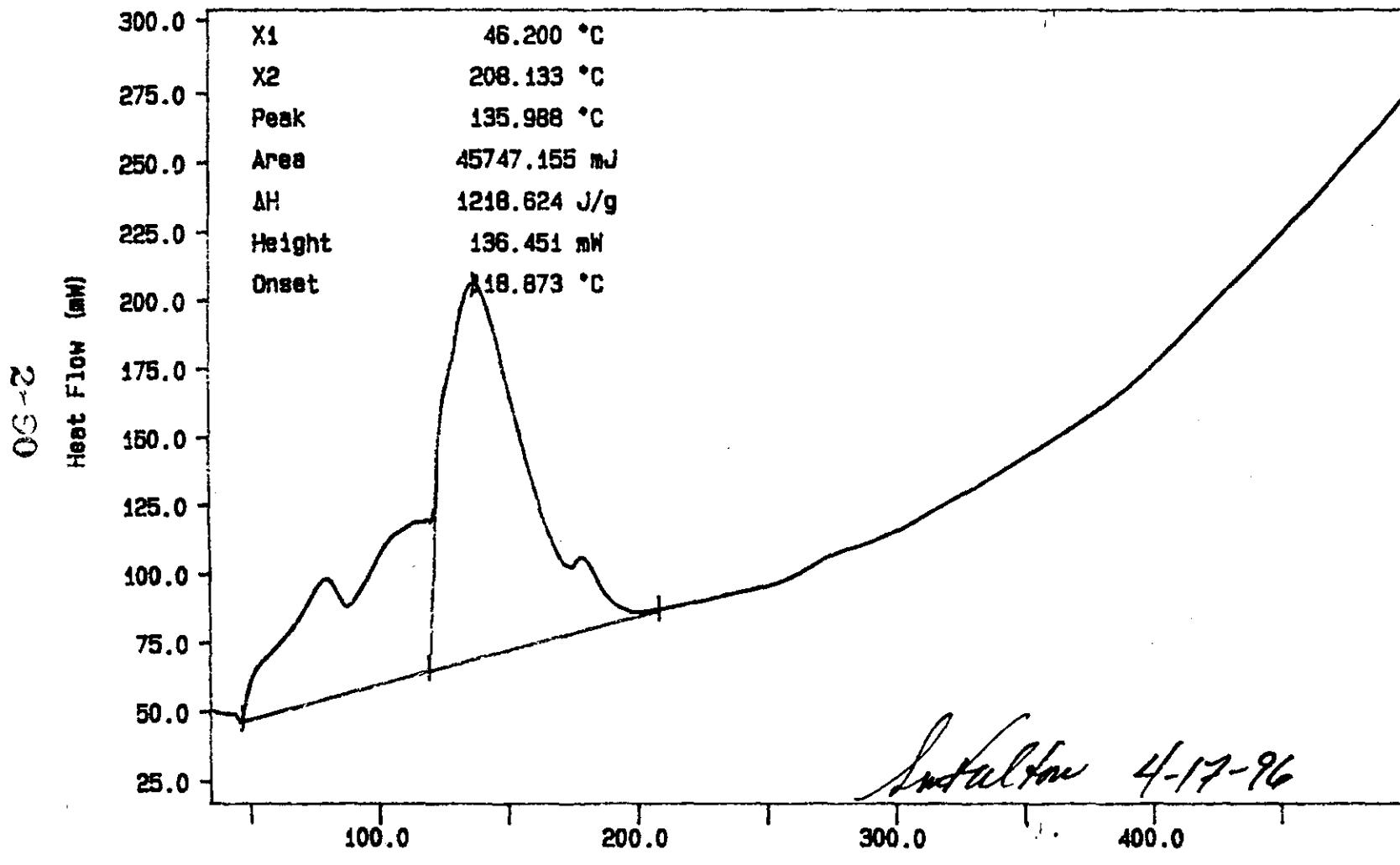
SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Apr 17 06:59:20 1996

Curve 1: DSC

File info: SAN041701 Wed Apr 17 07:49:42 1996

Sample Weight: 37.540 mg

S96T001068



exotherm down, N₂ purge gas
TEMP: 25.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Apr 17 08:32:53 1996

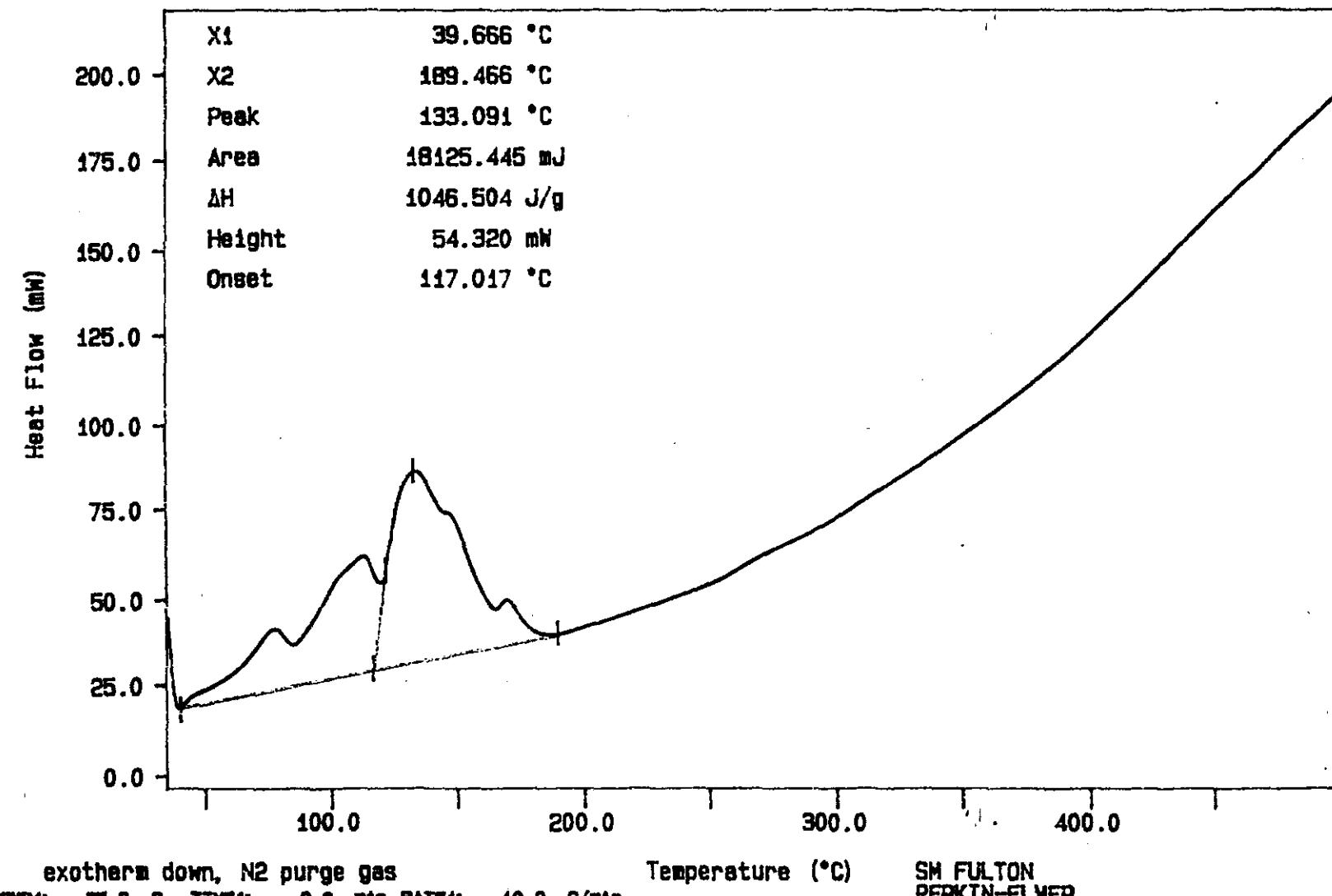
Curve 1: DSC

File info: SAM041702 Wed Apr 17 09:29:00 1996

Sample Weight: 17.320 mg

S96T001068 DUP

WHC-SD-WM-DP-184, REV. 1



exotherm down, N₂ purge gas
 TEMP: 30.0 °C TIMES: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

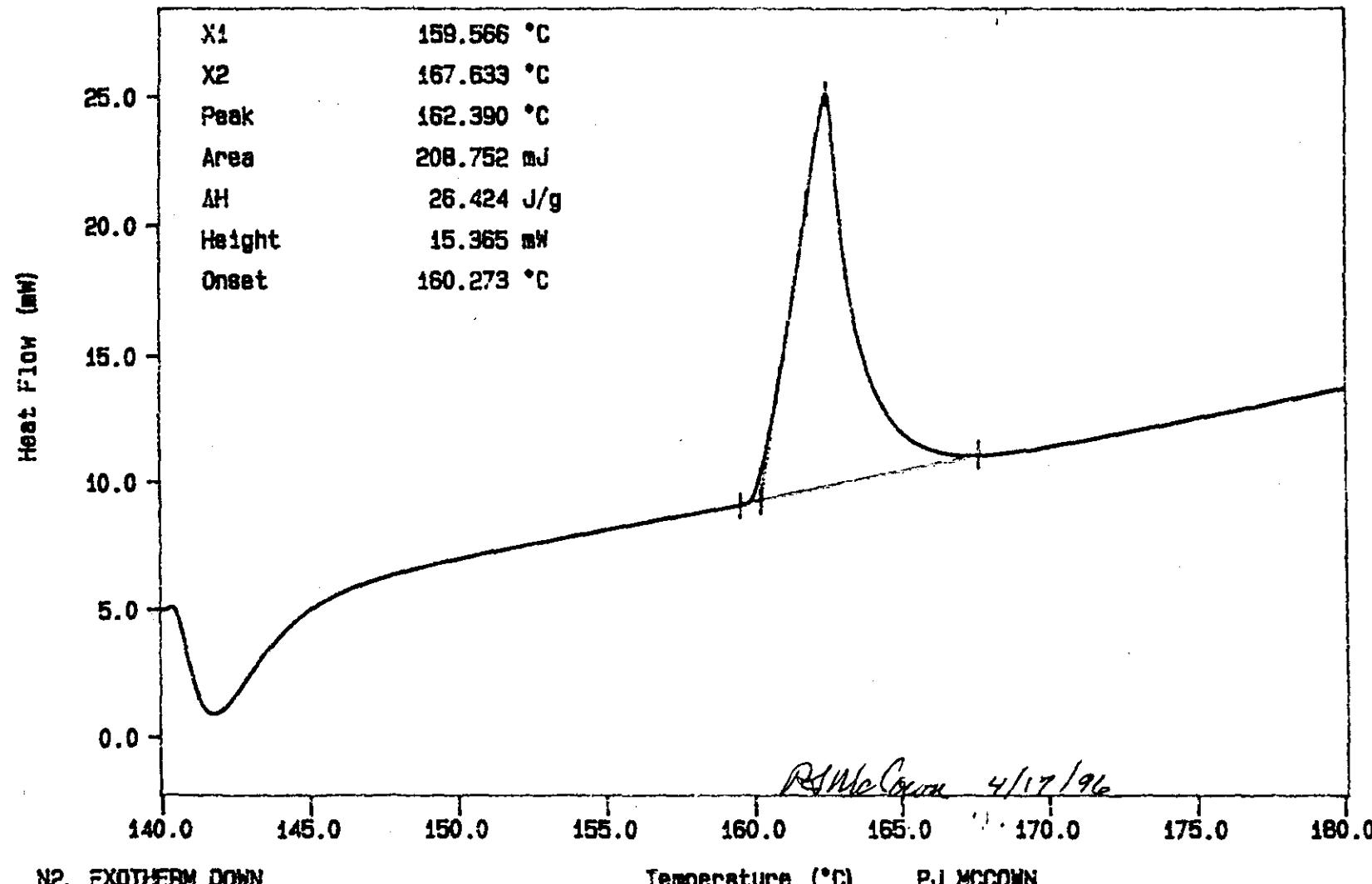
SM FULTON
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Wed Apr 17 09:34:05 1996

Curve 1: DSC

File info: INDO41705 Wed Apr 17 18:29:17 1996

Sample Weight: 7.900 mg

12N14-B INDIUM AT 10C\MIN



N2, EXOTHERM DOWN

TEMP: 140.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

PJ MCCOWN

PERKIN-ELMER

7 Series Thermal Analysis System

Wed Apr 17 18:33:20 1996

Curve 1: DSC

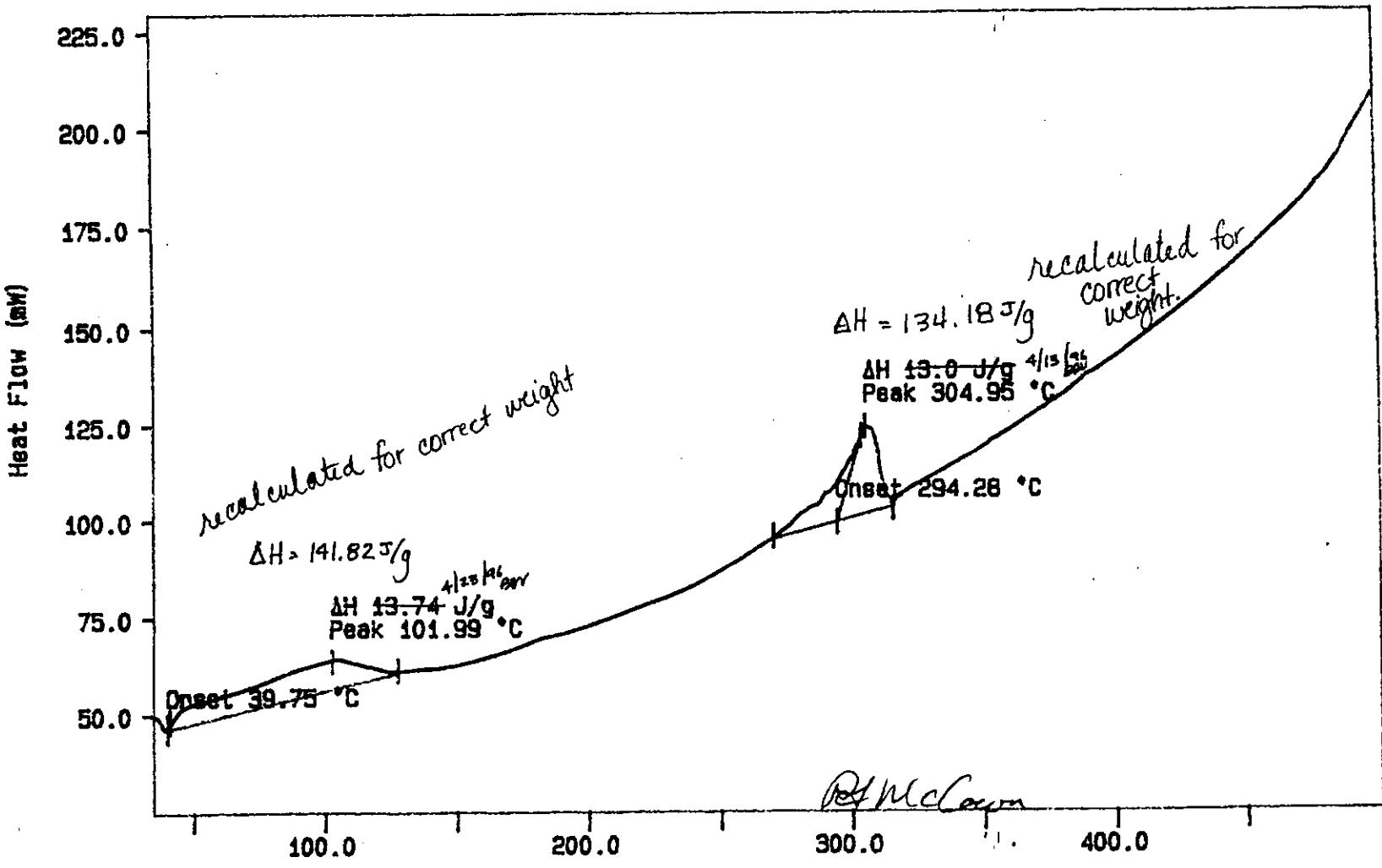
File info: SAM041703 Wed Apr 17 20:09:28 1996

Sample Weight: 187.130 mg

S96T001143 SAM ^{should be 18.130 mg}

PJM

2-93



exotherm down, N₂ purge gas
 TEMP: 35.0 °C TIME: 0.0 min RATE: 10.0 °C/min
 TEMP: 500.0 °C

Temperature (°C)

PJ MCCOWN
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Wed Apr 17 20:39:21 1996

WHC-SD-WM-DP-184, REV. I

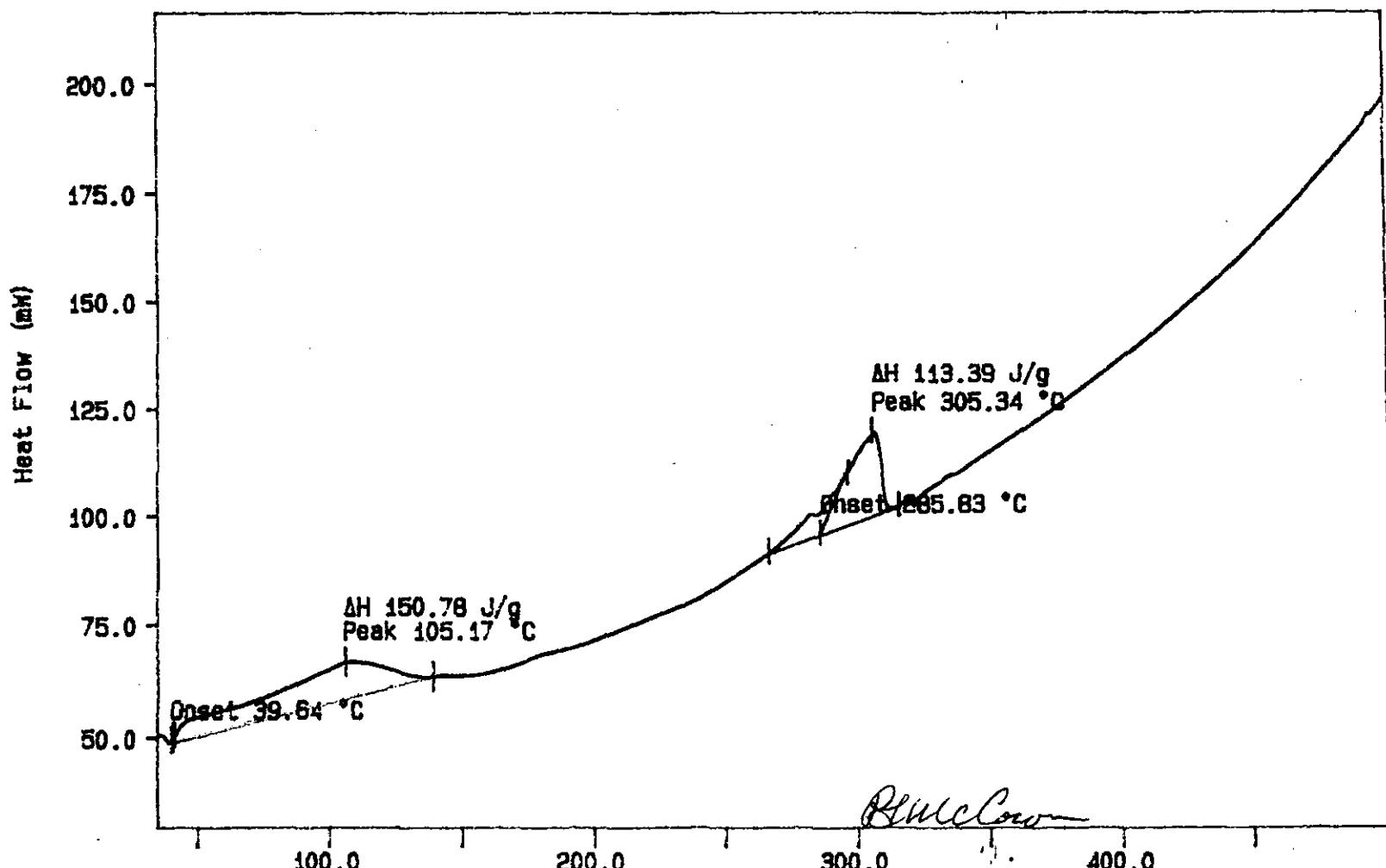
Curve 1: DSC

File info: SAM041704 Wed Apr 17 21:41:59 1996

Sample Weight: 19.070 mg

S96T001143 DUP

2-94



exotherm down, N2 purge gas

TEMP: 35.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Apr 17 21:47:22 1996

04/23/96

10:13

R508 372 2929

WESTINGHOUSE

MO-924 200W

WHC-SD-WM-DP-184, REV.

2024

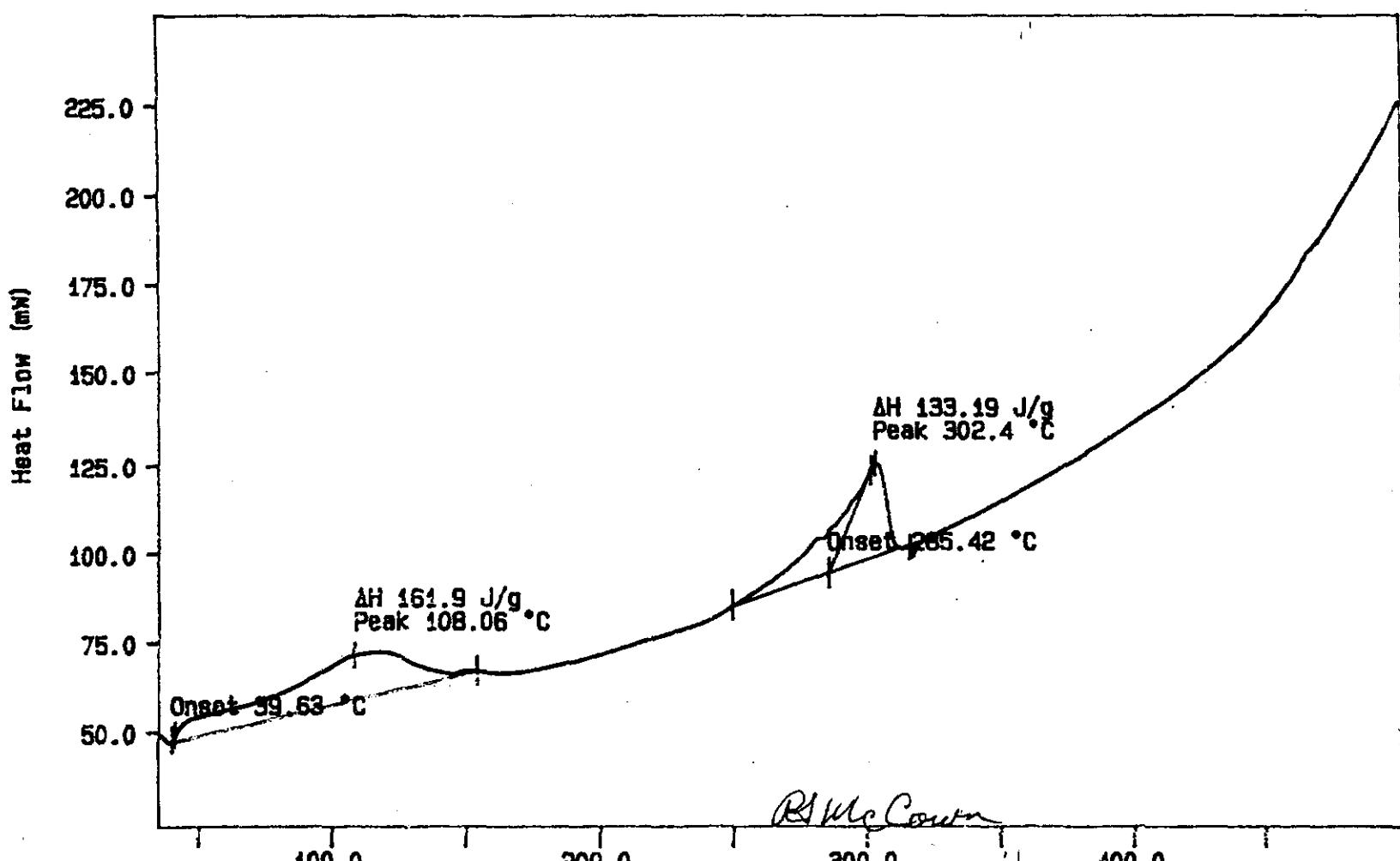
Curve 1: DSC

File info: SAH041705 Wed Apr 17 23:05:39 1996

Sample Weight: 27.430 mg

S96T001143 TRIP

2 - 95



exotherm down, N₂ purge gas

TEMP: 25.0 °C TIMES: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

PJ MCCOWN

PERKIN-ELMER

7 Series Thermal Analysis System
Wed Apr 17 23:09:02 1996

WHC-SD-WM-DP-184, REV. I

worklistrpt Version 2.1 05/15/95
04/08/96 12:07

Page: 1

LABCORE Data Entry Template for Worklist#

6624

Analyst: RDM Instrument: DSC0 3 Book # 12N14BMethod: LA-514-114 Rev/Mod C-1

Worklist Comment: U-107 DSC RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	SOLID	<u>28.45</u>	<u>28.17</u>	<u>N/A</u>
96000126	U-107	2 SAMPLE	S96T001128 0		DSC-03	SOLID	<u>N/A</u>	<u>Ø</u>	<u>Joules/g</u>
96000126	U-107	3 DUP	S96T001128 0		DSC-03	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u> Joules/g

Final page for worklist # 6624Blatt See attached for signatures

Analyst Signature

Date

4-8-96

BB6

Jay Hennings 4-9-96

Analyst Signature

Date

Verified by

J. Anastas 4-11-96

Data Entry Comments:

Sample produced two endotherms one at 145.45°C with a delta H of 423.48 J/g and second at 281.6°C with a delta H of 73.16 J/g.

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

worklistrpt Version 2.1 05/15/95
03/18/96 13:29

WHC-SD-WM-DP-184, REV. 1

Page: 1

LABCORE Data Entry Template for Worklist#**6624**Analyst: RDM Instrument: DSC0 Book # 7GA 4/5/96
12N1413Method: LA-514-113 Rev/Mod C-1

Worklist Comment: U-107 DSC RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID		N/A	Joules/g
96000126	U-107	2 SAMPLE	S96T001128 0		DSC-01	SOLID	N/A		Joules/g
96000126	U-107	3 DUP	S96T001128 0		DSC-01	SOLID		N/A	Joules/g

Final page for worklist #**6624**RDM4/5/96

Analyst Signature

Date

Analyst Signature

Date

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

003

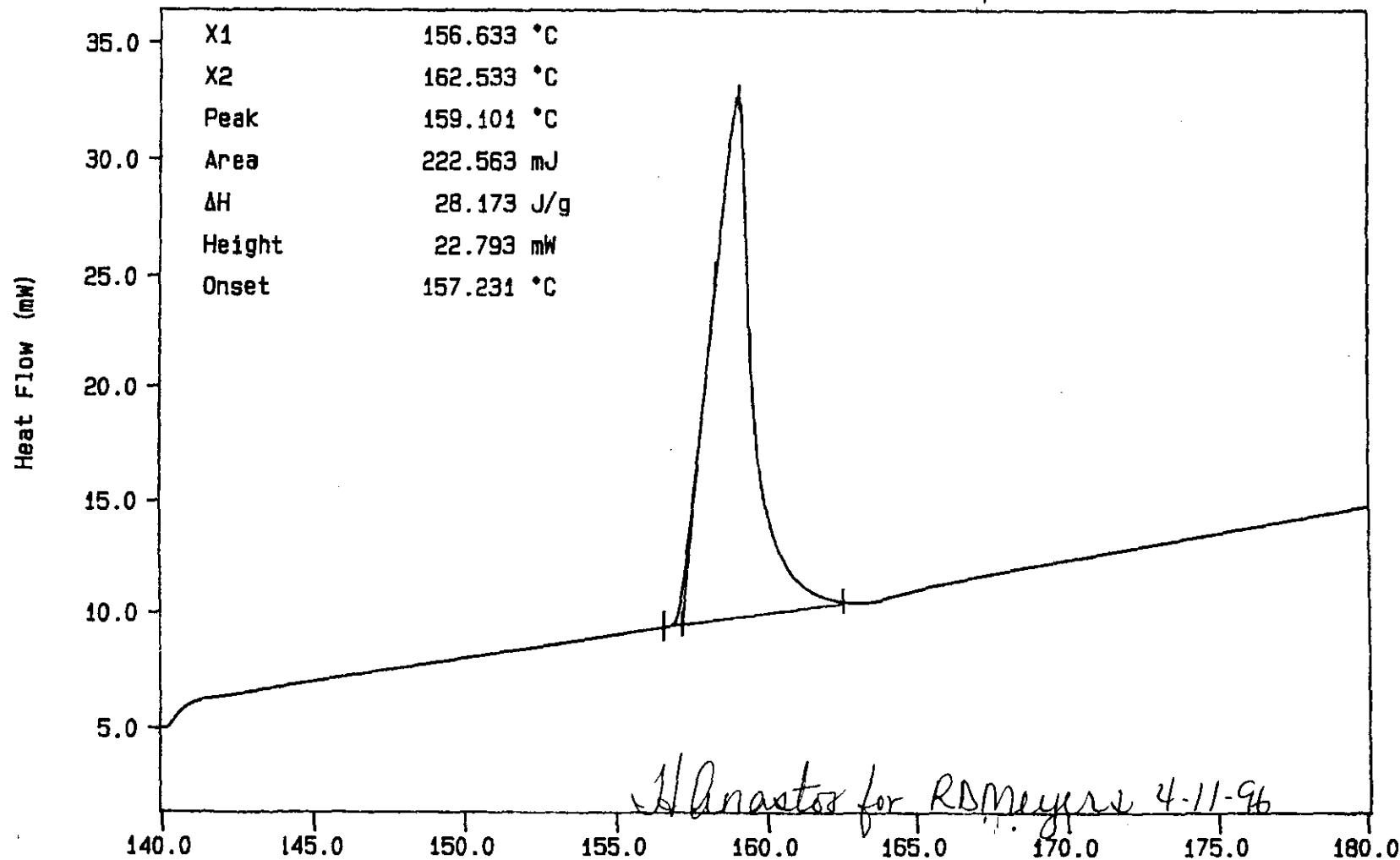
Curve 1: DSC

File info: IN040401 Thu Apr 4 06:40:50 1996

Sample Weight: 7.900 mg

12N14-B INDIUM AT 10C\MIN

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 299 TO 2100



N2, EXOTHERM DOWN

TEMP1: 140.0 °C TIME1: 0.0 min RATE1: 10.0 °C/min
TEMP2: 180.0 °C

Temperature (°C)

PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Apr 5 01:12:45 1996

④ 004

Curve 1: DSC

File info: sam040401 Thu Apr 4 22:24:09 1996

Sample Weight: 50.100 mg

S96T001128

WESTINGHOUSE → → → M0-924 200W

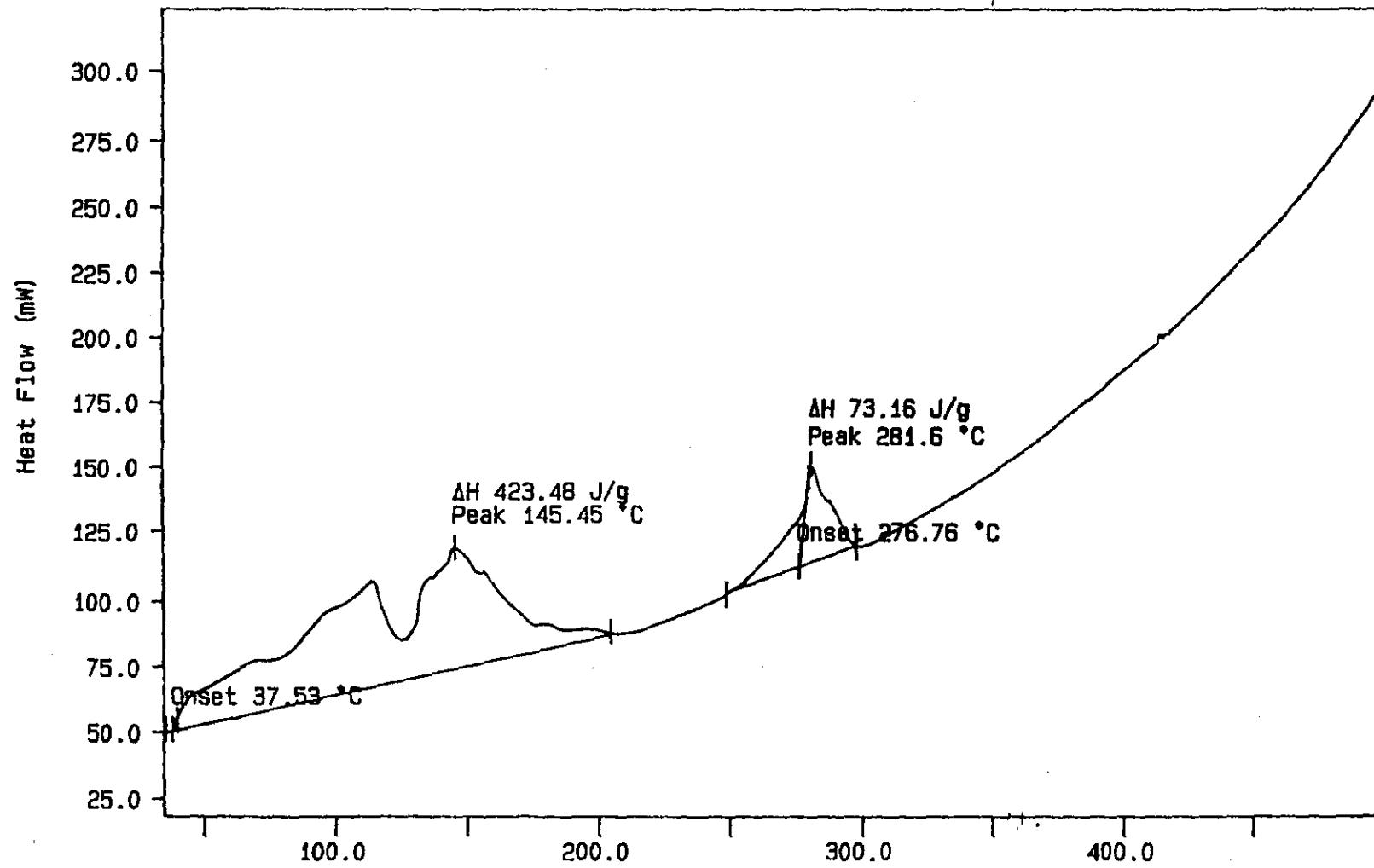
WESTINGHOUSE

2509 372 2929

14:56

04/08/96

2-99



exotherm down, N₂ purge gas
TEMP: 35.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

rd meyers
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Apr 5 00:51:34 1996

WHC-SD-WM-DP-184, REV. 1

0005

Curve 1: DSC

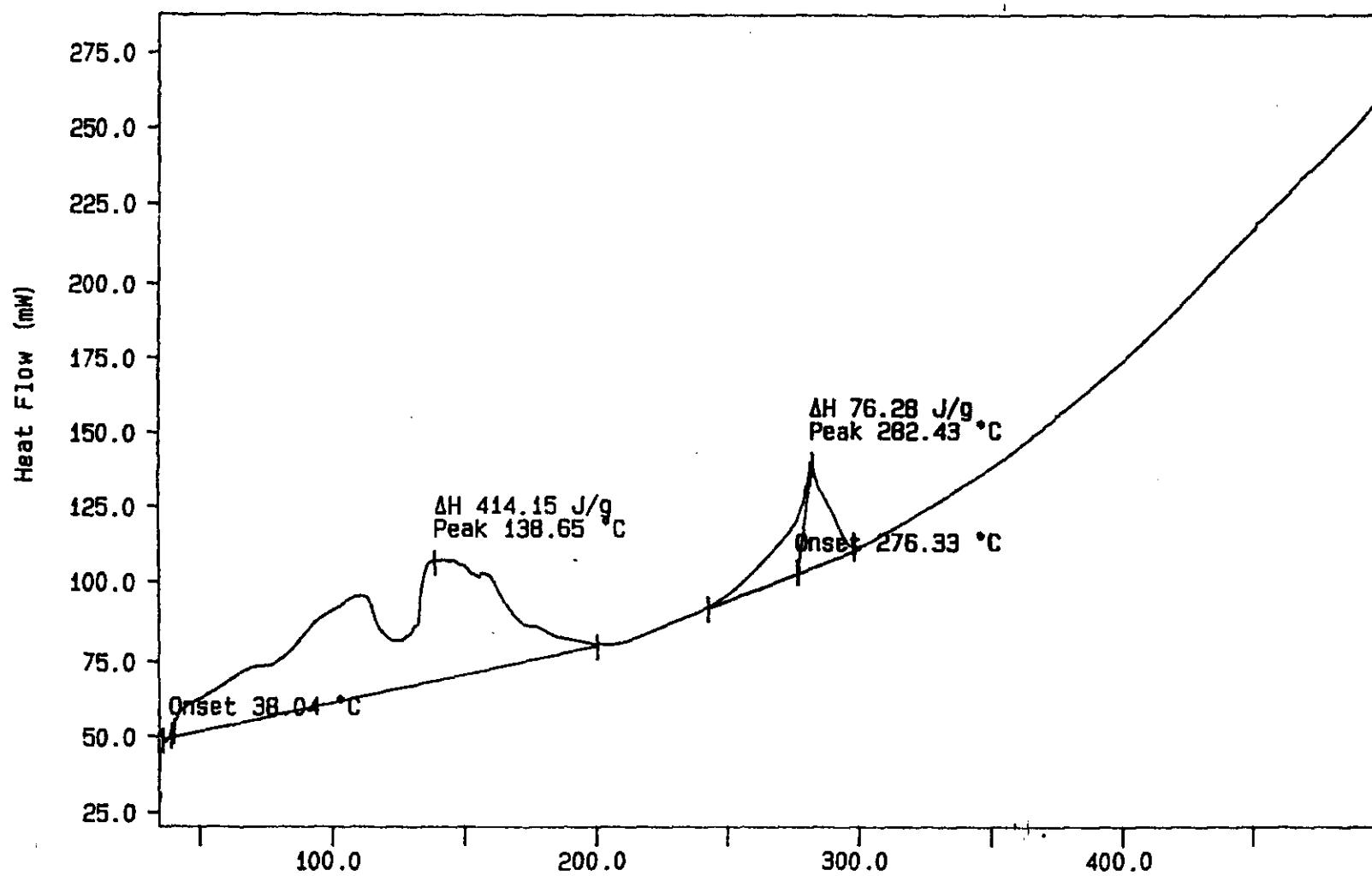
File info: sam040501 Fri Apr 5 01:42:46 1996

Sample Weight: 45.360 mg

S96T001128 DUP

WESTINGHOUSE →→ MO-924 200W

2-TG



2509 372 2929

14:57

04/08/96

exotherm down, N2 purge gas

TEMP1: 35.0 °C TIME1: 0.0 min RATE1: 10.0 °C/min

Temperature (°C)

rd meyers

PERKIN-ELMER

7 Series Thermal Analysis System

Fri Apr 5 02:10:20 1996

WHC-SD-WM-DP-184, REV. 1

worklistrpt Version 2.1 05/15/95

04/03/96 11:38

Page: 1

LABCORE Data Entry Template for Worklist#**6627**Analyst: RDM Instrument: DSC0 1 Book # 12N14BMethod: LA-514-113 Rev/Mod C-1

Worklist Comment: U-107 DSC RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		DSC-01	SOLID	<u>28.45</u>	<u>32.0</u>	N/A	Joules/g
96000126	U-107	2 SAMPLE	S96T001059 0	DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
		3 STD		DSC-01	SOLID	<u>28.45</u>	<u>32.4</u>	N/A	Joules/g
96000126	U-107	4 DUP	S96T001059 0	DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	N/A	Joules/g
		5 STD		DSC-01	SOLID	<u>28.45</u>	<u>32.4</u>	N/A	Joules/g
96000126	U-107	6 SAMPLE	S96T001070 0	DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
96000126	U-107	7 DUP	S96T001070 0	DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	N/A	Joules/g

Final page for worklist # **6627**

See Attached for Signatures

Analyst Signature Date

Frank Conk 4/11/96

Analyst Signature Date

Verified by Blandine Valenzuela
4/15/96

S96T001059 produced two endotherms, one at 95.6°C with a delta H of 794.0 J/g and second at 286.0°C with a delta H of 88.1 J/g.

Data Entry Comments: S96T001070 produced one endotherm at 103.3°C with a delta H of 1801.0 J/g.

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WHC-SD-WM-DP-184, REV. 1

worklistrpt Version 2.1 05/15/95
03/18/96 13:31

Page: 1

LABCORE Data Entry Template for Worklist#**6627**Analyst: RJM Instrument: DSC0 Book # 12N)4-BMethod: LA-514-113 Rev/Mod C-1

Worklist Comment: U-107 DSC RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.45</u>	<u>32.0</u>	<u>N/A</u> Joules/g
96000126	U-107	2 SAMPLE	S96T001059 0		DSC-01	SOLID	<u>N/A</u>		Joules/g
96000126	U-107	3 DUP	S96T001059 0		DSC-01	SOLID		<u>N/A</u>	Joules/g
96000126	U-107	4 SAMPLE	S96T001070 0		DSC-01	SOLID	<u>N/A</u>		Joules/g
96000126	U-107	5 DUP	S96T001070 0		DSC-01	SOLID		<u>N/A</u>	Joules/g

Final page for worklist # 6627RJM 3/21/96

Analyst Signature

Date

Analyst Signature

Date

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

2-102

2-103

DSC STD 12N14-B

9.010 mg

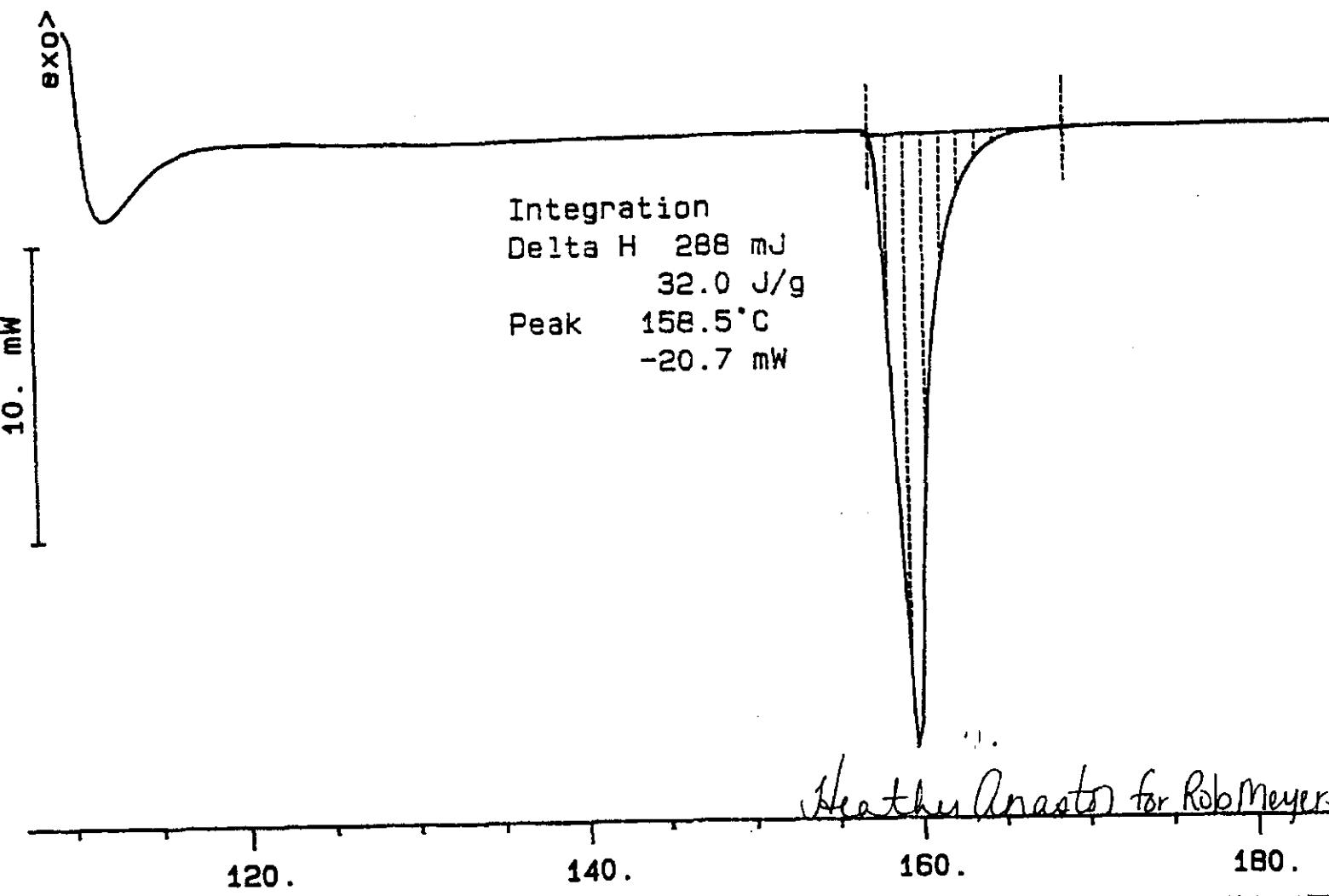
Rate: 10.0 °C/min

File: 00079.001

Ident: 0.0

DSC METTLER 29-Mar-96

222-S Laboratory



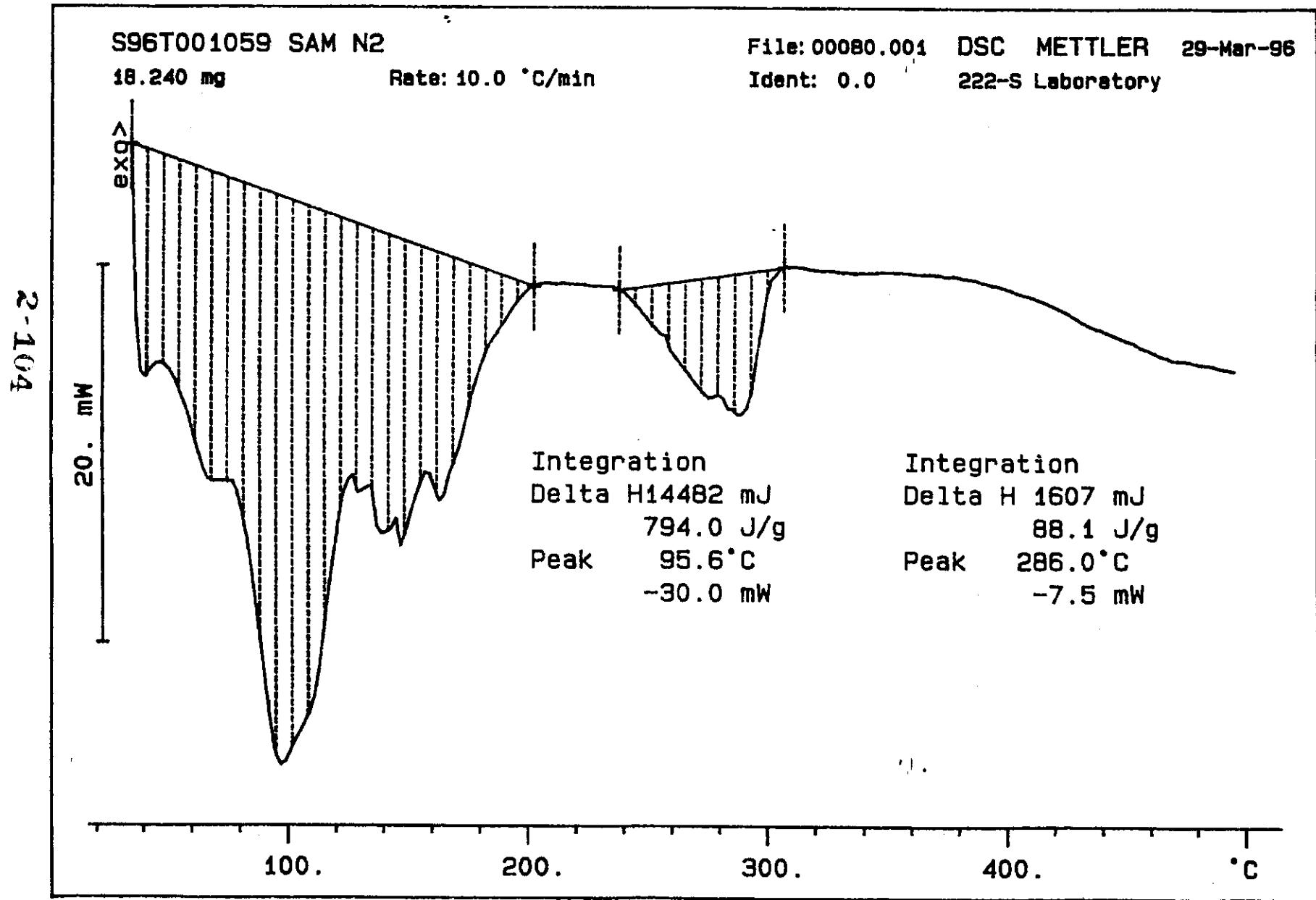
04/10/96 11:52

509 372 2929

WESTINGHOUSE

→→ MO-924 200W

035



04/10/96 11:52 ☺509 372 2929

WESTINGHOUSE

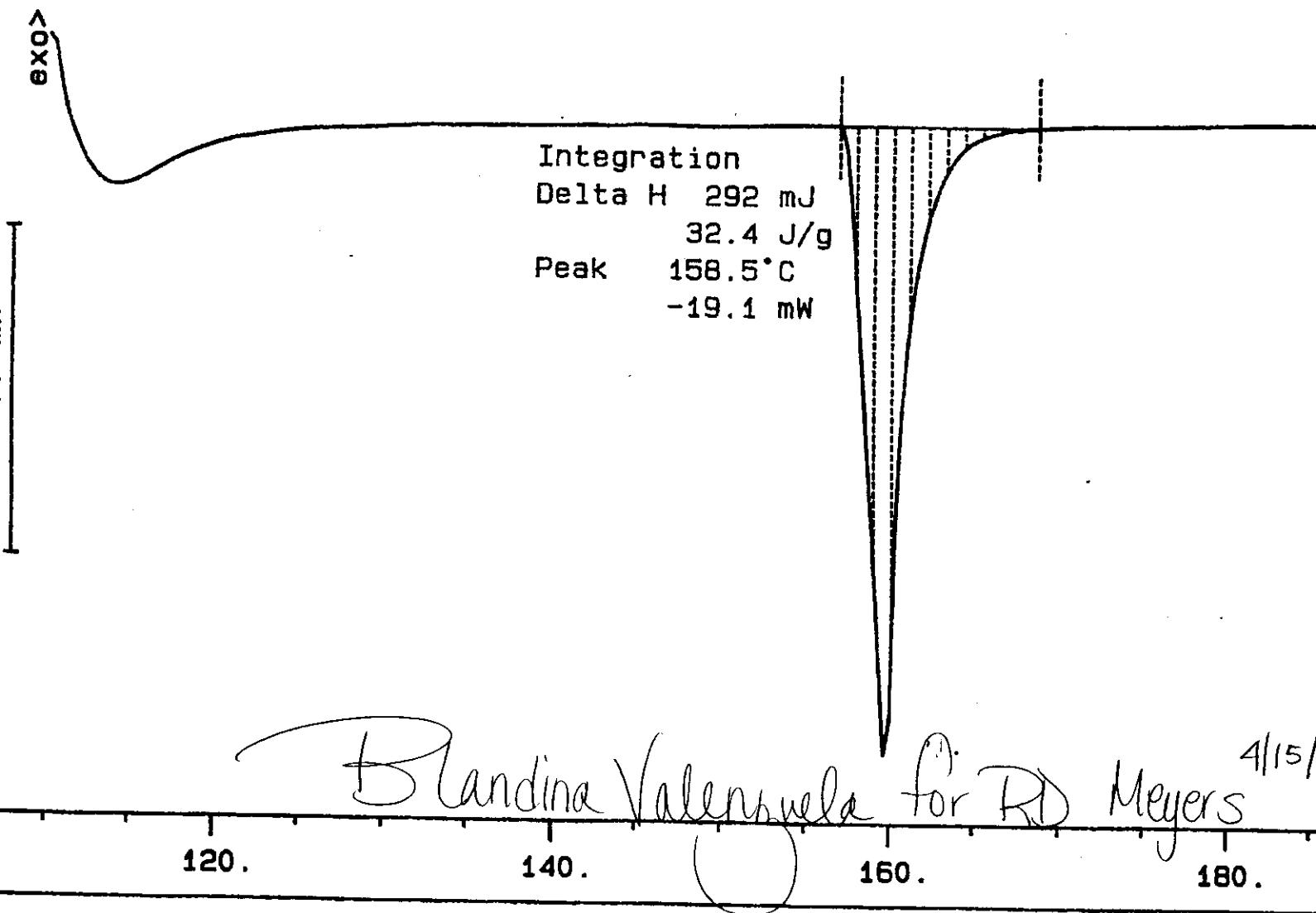
→→ MO-924 200W

036

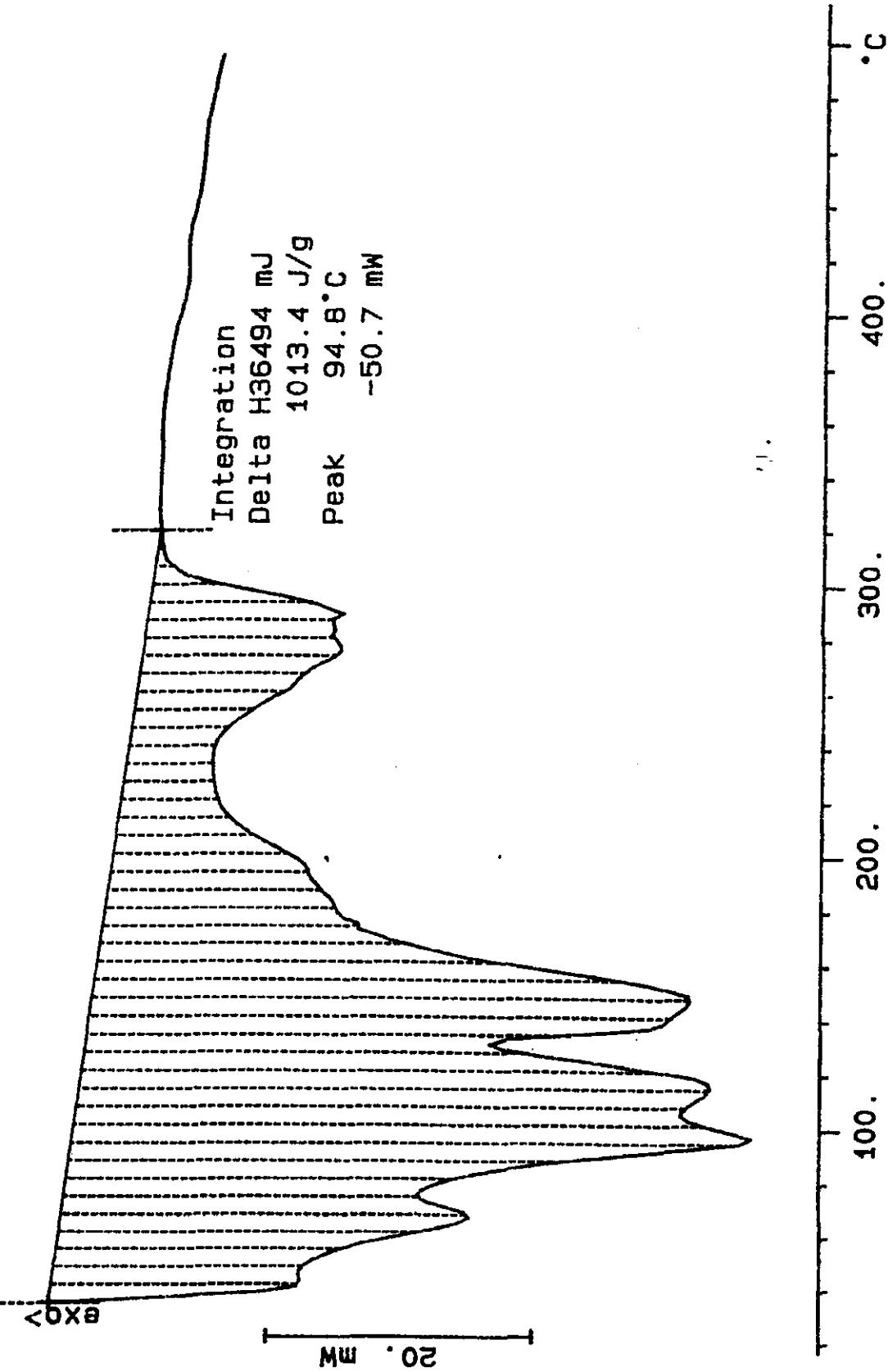
DSC STD 12N14-B
9.010 mg

Rate: 10.0 °C/min

File: 00094.001 DSC METTLER 30-Mar-96
Ident: 0.0 222-S Laboratory



S96T001059 DUP N2
36.010 mg
Rate: 10.0 °C/min
File: 00002.001 DSC METTLER 30-Mar-96
Ident: 0.0 222-S Laboratory



DSC STD 12N14-B

14.190 mg

Rate: 10.0 °C/min

File: 00015.001 DSC METTLER 09-Apr-96
Ident: 0.0 222-S Laboratory

exo

2-10⁷

10. mW

Integration
Delta H 459 mJ
32.4 J/g
Peak 159.7 °C
-26.3 mW

120.

140.

160.

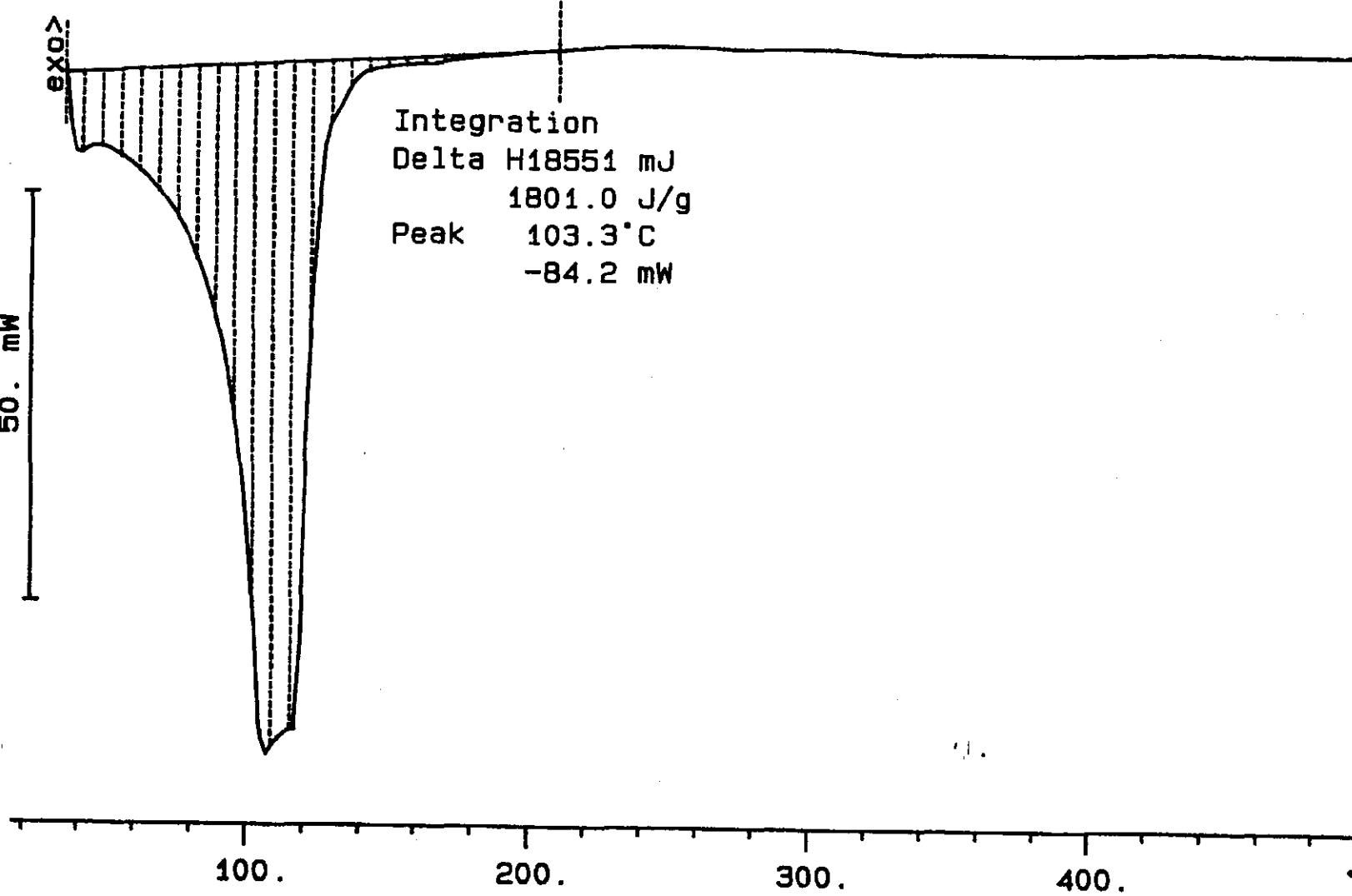
180. °C

Blandina Valenzuela for RD Meyers 4/15/96

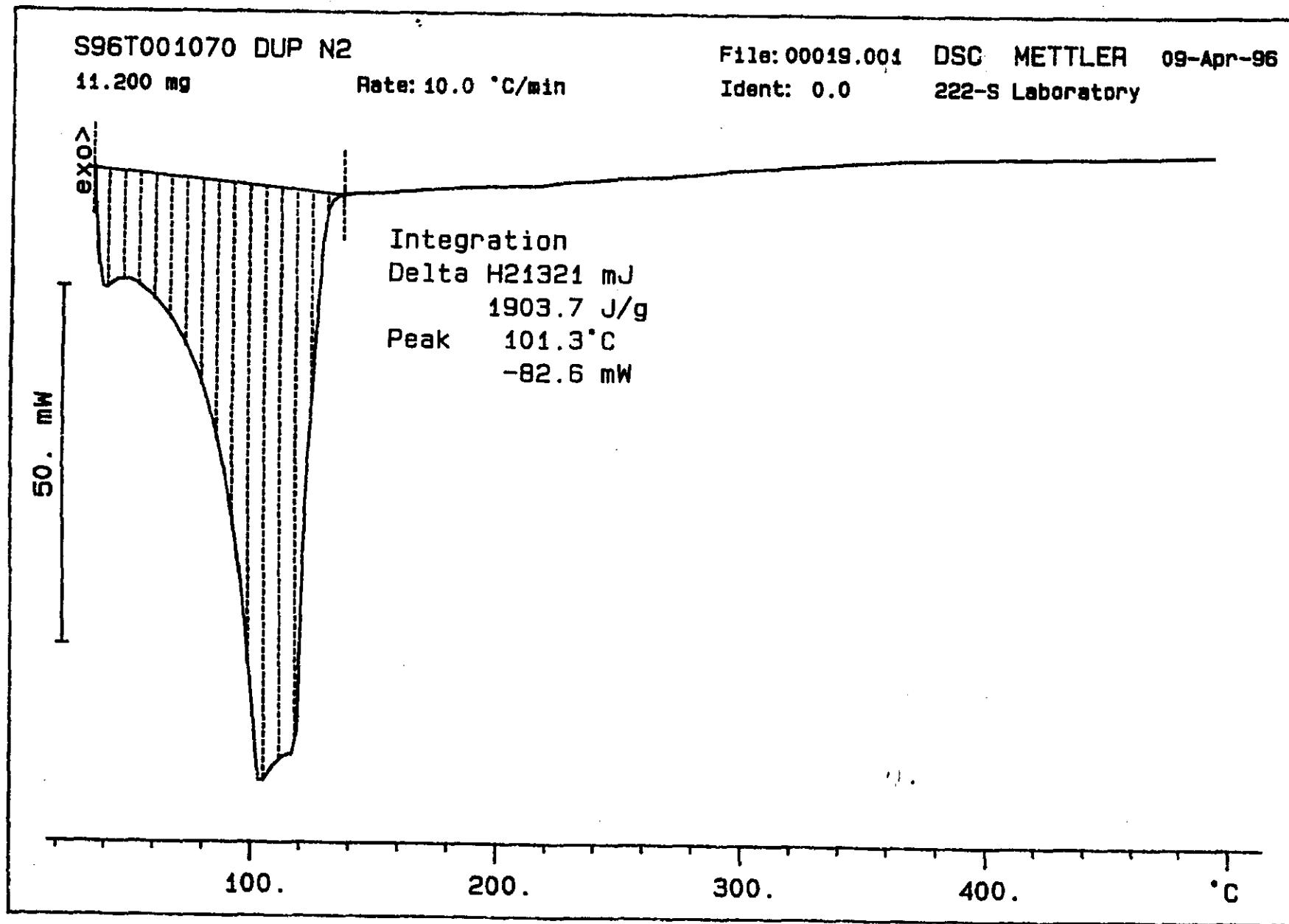
S96T001070 SAM N2

10.300 mg

Rate: 10.0 °C/min

File: 00017.001 DSC METTLER 09-Apr-96
Ident: 0.0 222-S Laboratory

2-109



LABCORE Data Entry Template for Worklist#

6655

Analyst: SMF Instrument: DSC0 1 Book # 12N14BMethod: LA-514-113 Rev/Mod C-1

Worklist Comment: U-107 DSC RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		DSC-01	LIQUID	<u>28.45</u>	<u>30.1</u>	N/A	Joules/g
96000085	U-107	2 SAMPLE	S96T000665	0	DSC-01	N/A	<u>54.8</u>		Joules/g
96000085	U-107	3 DUP	S96T000665	0	DSC-01	LIQUID	<u>54.8</u>	<u>53.7</u>	N/A Joules/g
96000085	U-107	4 SAMPLE	S96T000682	0	DSC-01	LIQUID	N/A	<u>65.3</u>	Joules/g
96000085	U-107	5 DUP	S96T000682	0	DSC-01	LIQUID	<u>65.3</u>	<u>63.7</u>	N/A Joules/g

Final page for worklist # **6655**Susan M. Dalton 4-17-96
Analyst Signature DateR. Jones 4-18-96
Analyst Signature DateVerified by H. Anastor 4-22-96

Data Entry Comments: S96T000665 produced an endotherm at 117.6°C with a delta H of 1008.2 J/g.
 The results given are the sum of two exotherms.

S96T000682 produced an endotherm at 112.5°C with a delta H of 958.2 J/g.

The results given are the sum of two exotherms.
 Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
 R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2-111 TO 2-115

DSC STD 12N14B

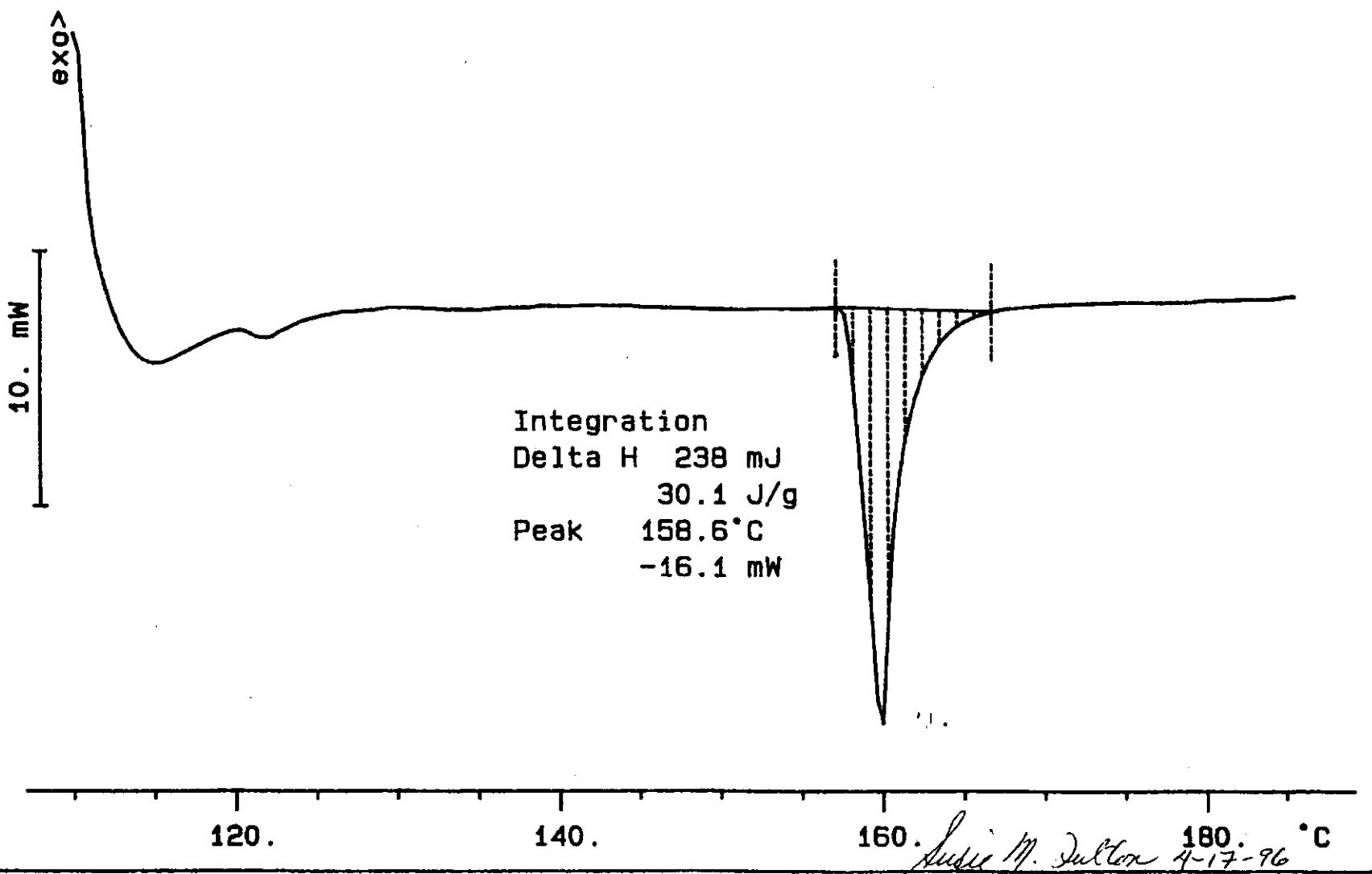
7.900 mg

Rate: 10.0 °C/min

File: 00061.001 DSC METTLER 17-Apr-96

Ident: 0.0 222-S Laboratory

2-111



2-112

S96T000665 N2

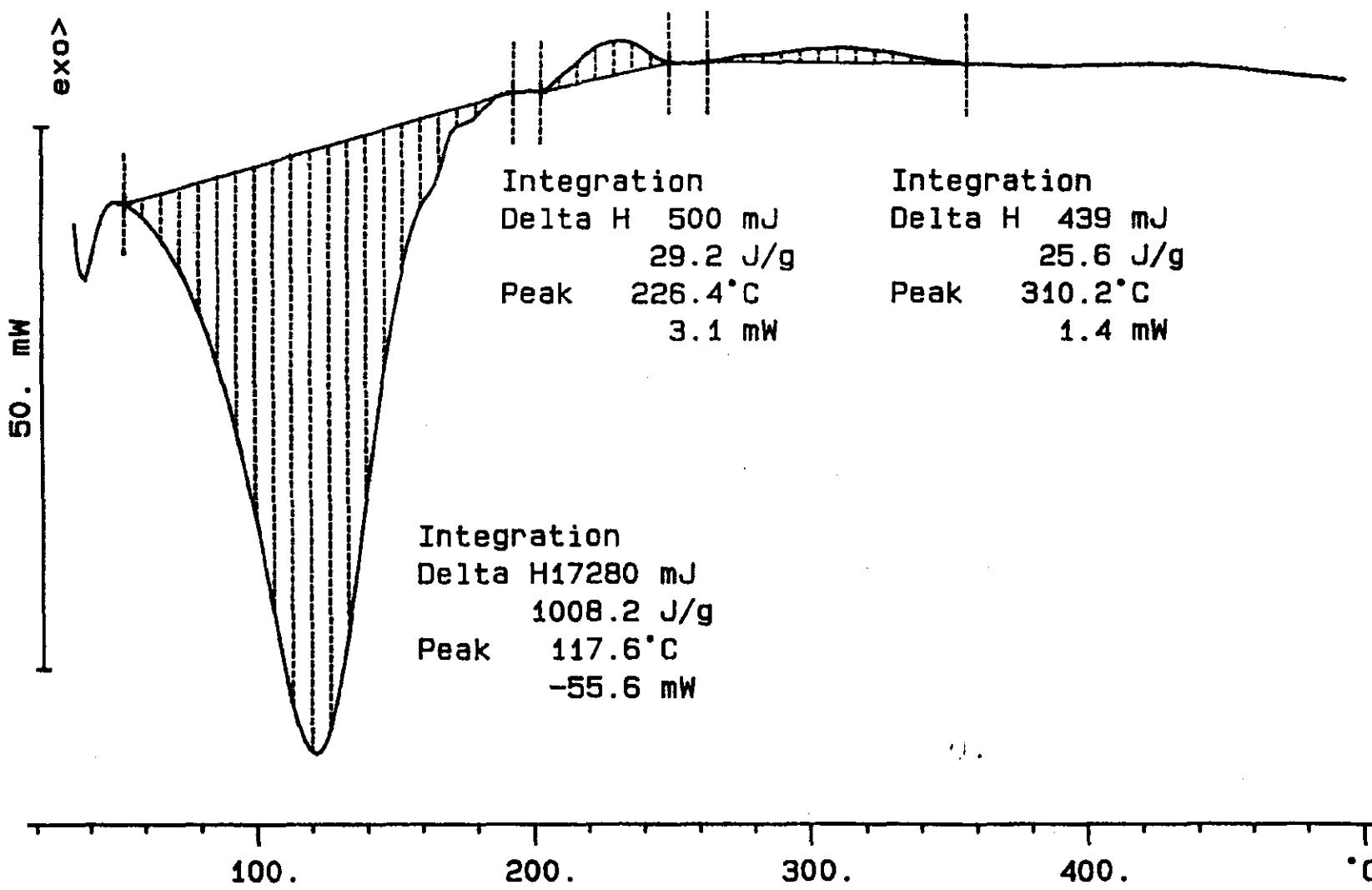
17.140 mg

Rate: 10.0 °C/min

File: 00063.001 DSC METTLER 17-Apr-96

Ident: 0.0 222-S Laboratory

exo<



2-143

S96T000665 DUP N2

17.488 mg

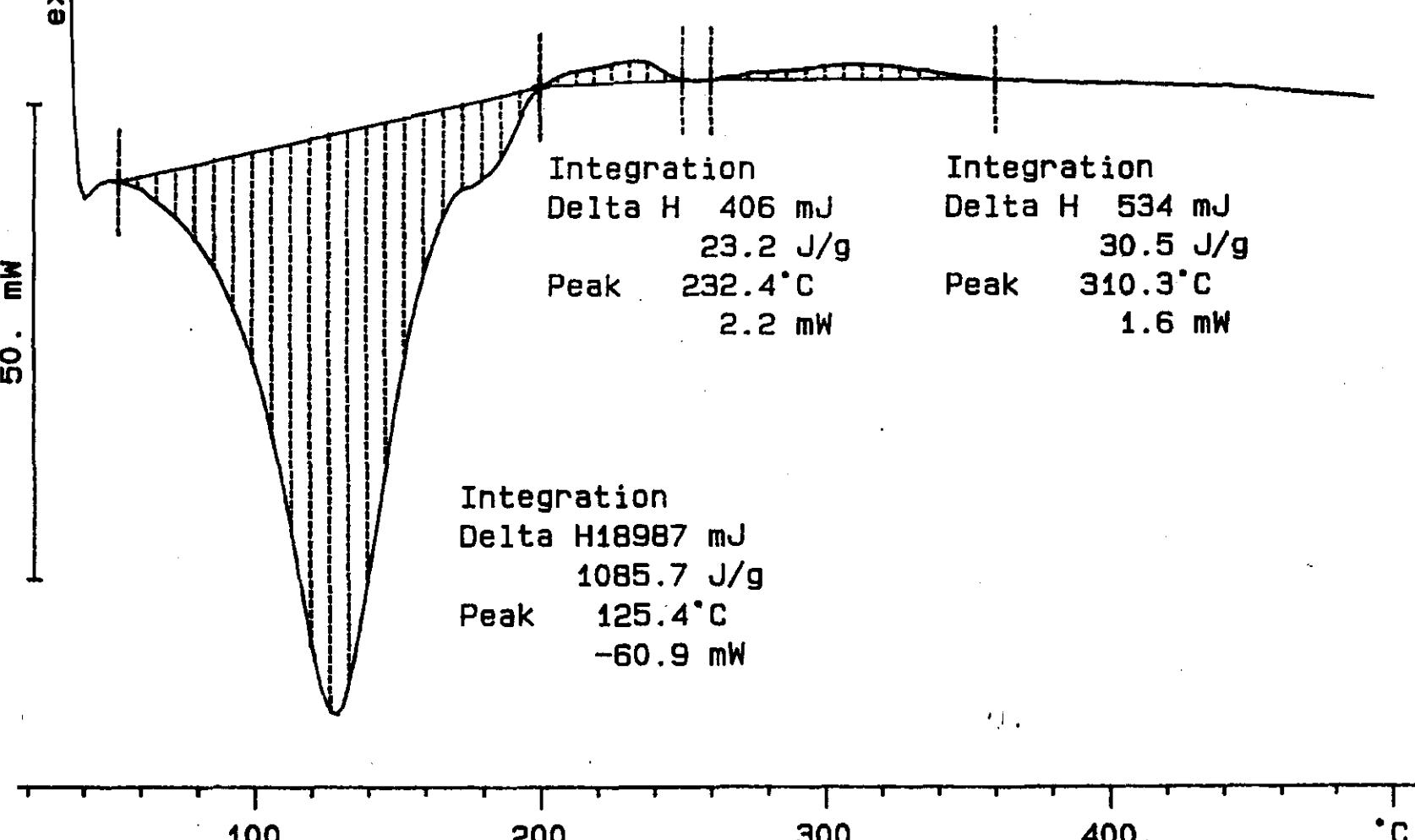
Rate: 10.0 °C/min

File: 00065.001 DSC METTLER 17-Apr-96

Ident: 0.0 222-S Laboratory

>exo

mW . 50



S96T000682 N2

12.749 mg

Rate: 10.0 °C/min

File: 00067.001 DSC METTLER 17-Apr-96
Ident: 0.0 222-S Laboratory

>exo

20. mW

Integration
Delta H 12216 mJ
958.2 J/g
Peak 112.5°C
-40.5 mW

Integration
Delta H 511 mJ
40.1 J/g
Peak 222.4°C
2.5 mW

Integration
Delta H 321 mJ
25.2 J/g
Peak 308.3°C
1.1 mW

100. 200. 300. 400. °C

S96T000682 DUP N2
13.452 mg

Rate: 10.0 °C/min

File: 00069.001 DSC METTLER 17-Apr-96
Ident: 0.0 222-S Laboratory

>exo<

20. mW

Integration
Delta H 14335 mJ
1065.6 J/g
Peak 124.3°C
-44.9 mW

Integration
Delta H 491 mJ
36.5 J/g
Peak 236.4°C
2.0 mW

Integration
Delta H 366 mJ
27.2 J/g
Peak 314.3°C
1.2 mW

100. 200. 300. 400. °C

LABCORE Data Entry Template for Worklist#**6753**Analyst: RK Instrument: DSC0 1 Book # 12114-BMethod: LA-514-113 Rev/Mod C-1

Worklist Comment: U-107 FOR DSC-01 PLEASE RUN UNDER N2 RTS!

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		DSC-01	SOLID	<u>28.45</u>	<u>28.6*</u>	N/A	Joules/g
96000085	U-107	2 SAMPLE	S96T001159 0	DSC-01	SOLID	<u>N/A</u>	<u>9.4</u>		Joules/g
96000085	U-107	3 DUP	S96T001159 0	DSC-01	SOLID	<u>9.4</u>	<u>14.5</u>	N/A	Joules/g

Final page for worklist #**6753**Kob Kim7/22/96

Analyst Signature

Date

T. DeG4/24/96

Analyst Signature

Date

Verified by Blandina Valenzuela 4-29-96

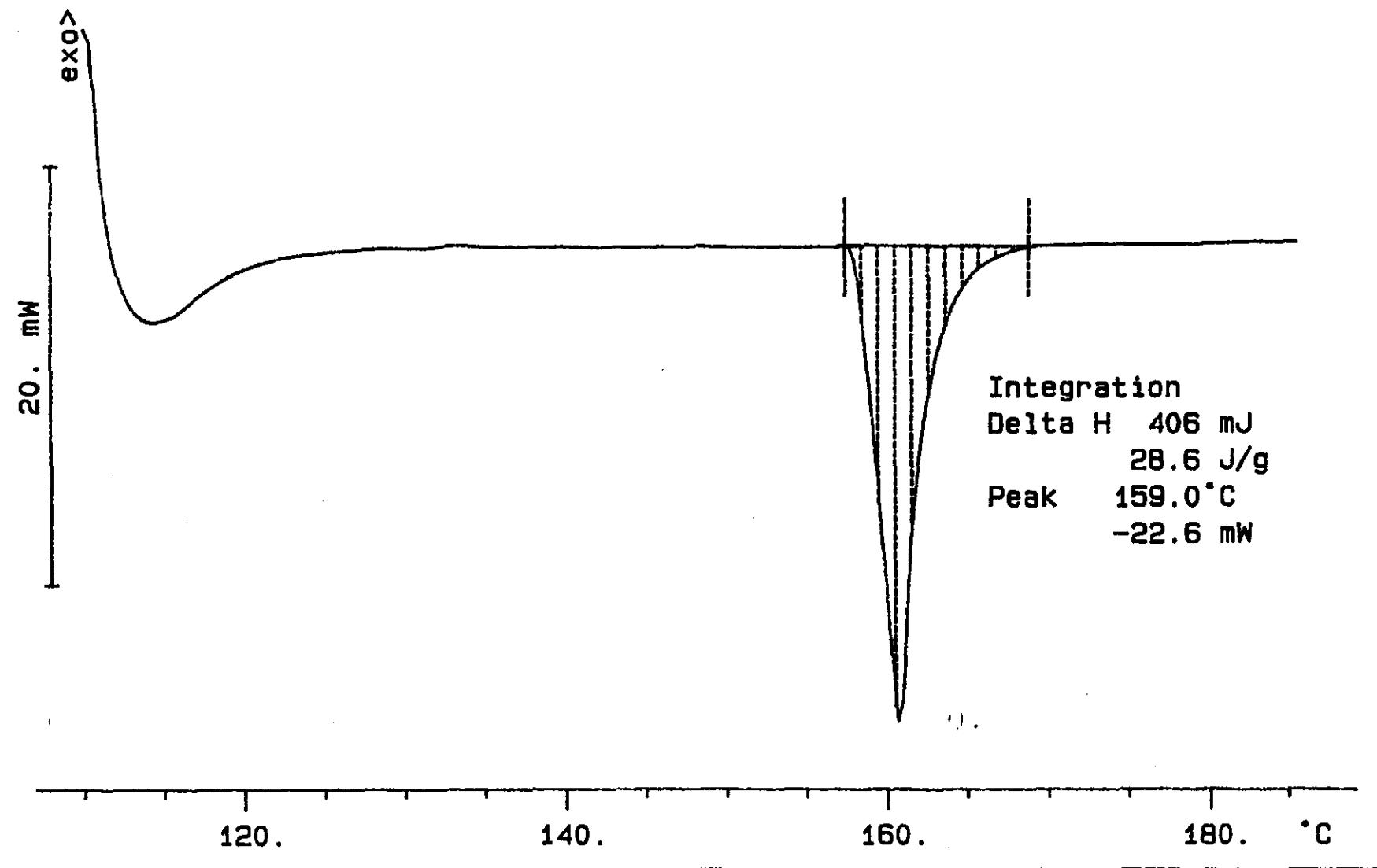
Data Entry Comments: Sample produced two endothermic regions, one with a peak at 45.4°C with a delta H of 582.4 J/g and second at 283.9 with a delta H of 88.1 J/g.

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

DSC STD 12N14-B N2
14.190 mg

Rate: 10.0 °C/min

File: 00051.001 DSC METTLER 22-Apr-96
Ident: 0.0 222-S Laboratory



Not Rm 4/22/96

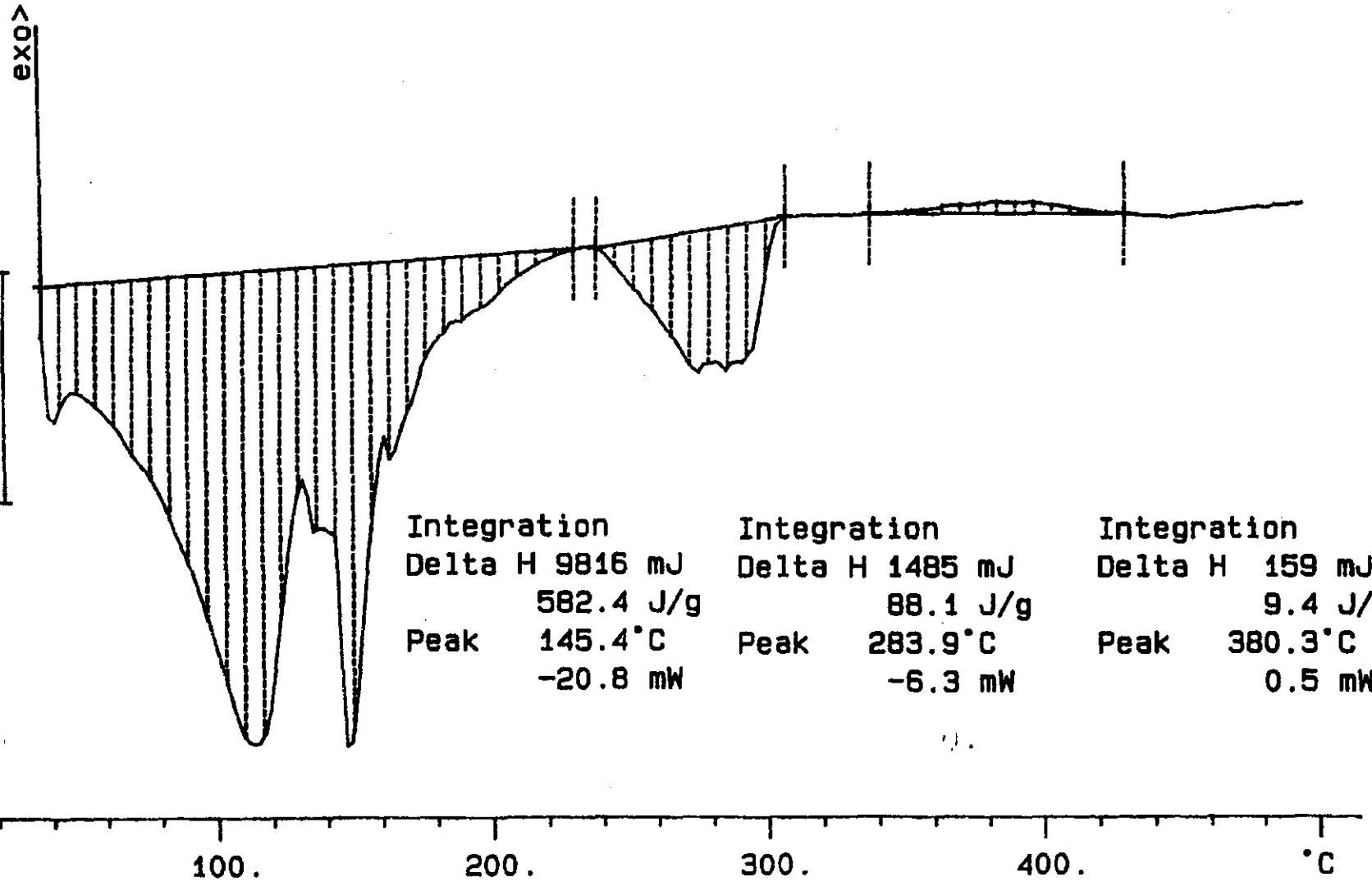
S96T001159 N2

16.855 mg

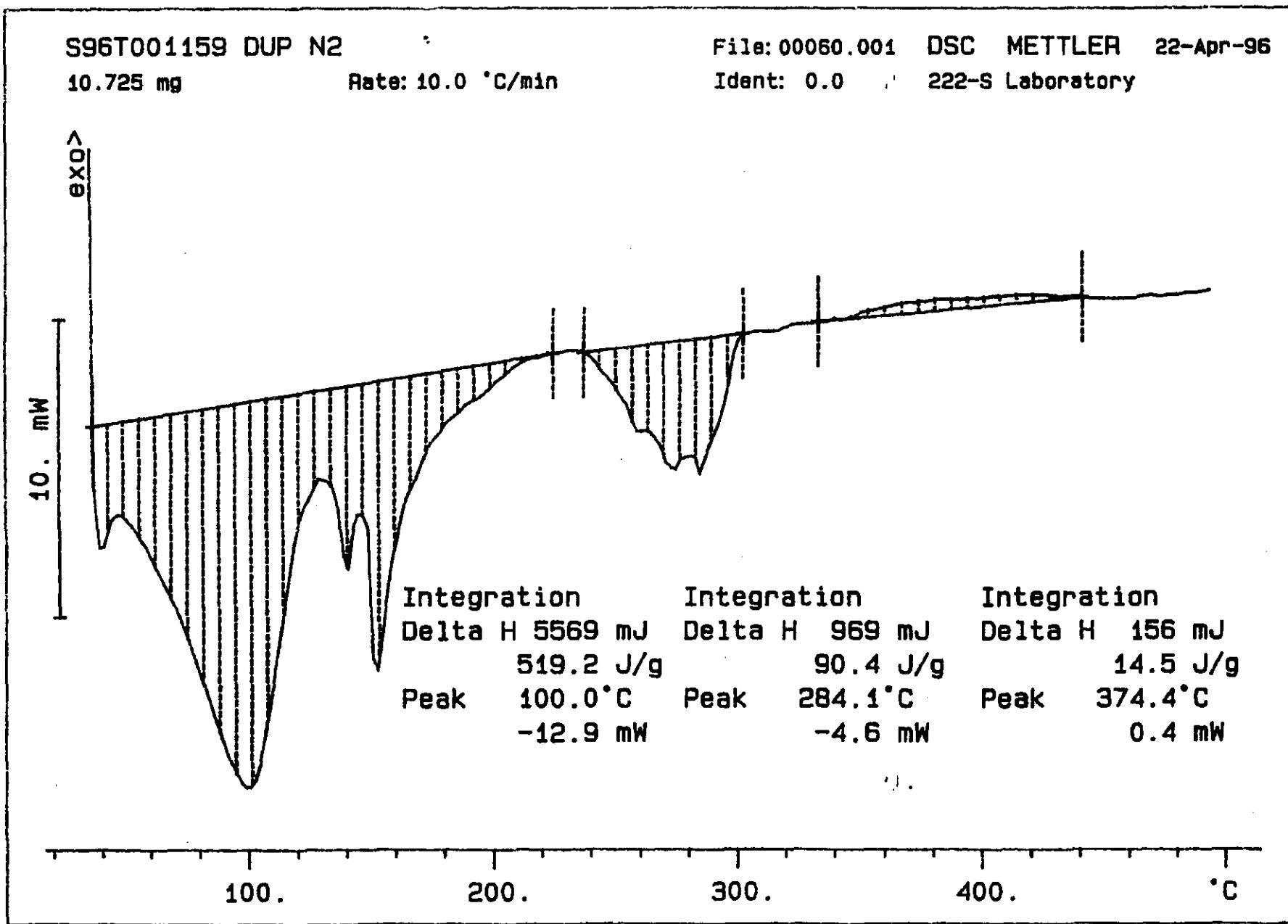
Rate: 10.0 °C/min

File: 00059.001 DSC METTLER 22-Apr-96

Ident: 0.0 222-S Laboratory



Not Norm 4/22/96



LABCORE Data Entry Template for Worklist#

7587

Analyst: SMF Instrument: DSC0 3 Book # 12N14BMethod: LA-514-114 Rev/Mod C-1

Worklist Comment: U-107 DSC RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		DSC-03	LIQUID	<u>28.45</u>	<u>27.78</u>	<u>N/A</u>	Joules/g
96000126	U-107	2 SAMPLE	S96T001119 0	DSC-03	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
96000126	U-107	3 DUP	S96T001119 0	DSC-03	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
96000126	U-107	4 SAMPLE	S96T001120 0	DSC-03	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
96000126	U-107	5 DUP	S96T001120 0	DSC-03	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
96000126	U-107	6 SAMPLE	S96T001121 0	DSC-03	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
96000126	U-107	7 DUP	S96T001121 0	DSC-03	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 7587See attached for signaturesAnalyst Signature BBR Date 4/17/96Analyst Signature RH Date 4-19-96

Verified by HAnastor 4-22-96

S96T001119 produced an endotherm at 124.5°C with a delta H of 1094.9 J/g.

S96T001120 produced an endotherm at 110.69°C with a delta H of 1947.5 J/g.

Data Entry Comments: S96T001121 produced two endotherms one at 113.8°C

(with a delta H of 2097.76 J/g) and second at 301.5°C with a delta H of 11.7 J/g.

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist#**7587**Analyst: SMF Instrument: DSC0 Book # 12 N14B

Method: LA-514-113 Rev/Mod

Worklist Comment: U-107 DSC RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		DSC-01	LIQUID			N/A	Joules/g
96000126	U-107	2 SAMPLE	S96T001110 0	DSC-01	LIQUID	N/A			Joules/g
96000126	U-107	3 DUP	S96T001110 0	DSC-01	LIQUID			N/A	Joules/g
96000126	U-107	4 SAMPLE	S96T001119 0	DSC-01	LIQUID	N/A			Joules/g
96000126	U-107	5 DUP	S96T001119 0	DSC-01	LIQUID			N/A	Joules/g
96000126	U-107	6 SAMPLE	S96T001120 0	DSC-01	LIQUID	N/A			Joules/g
96000126	U-107	7 DUP	S96T001120 0	DSC-01	LIQUID			N/A	Joules/g
96000126	U-107	8 SAMPLE	S96T001121 0	DSC-01	LIQUID	N/A			Joules/g
96000126	U-107	9 DUP	S96T001121 0	DSC-01	LIQUID			N/A	Joules/g

Final page for worklist # 7587Susie M. Dalton 4-16-96

Analyst Signature Date

Analyst Signature Date

Data Entry Comments:

S96T001110 - Empty

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

2-121

Curve 1: DSC

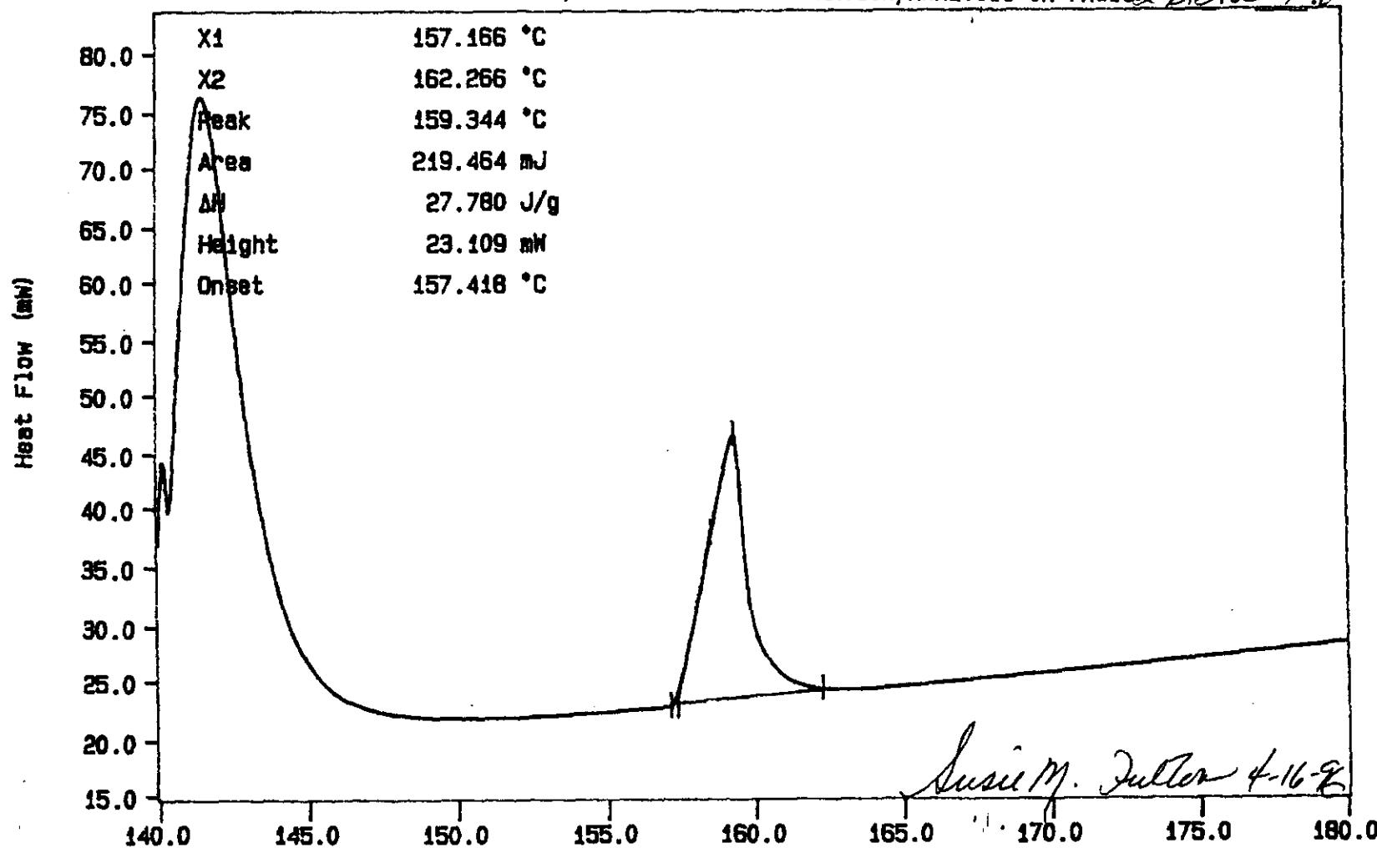
File info: INDO41601 Tue Apr 16 06:46:25 1996

Sample Weight: 7.900 mg

12N14-B INDIUM AT 10C\MIN

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2620 TO 266

2-122

*Susie M. Fulton 4-16-96*N₂, EXOTHERM DOWN

TEMP: 140.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

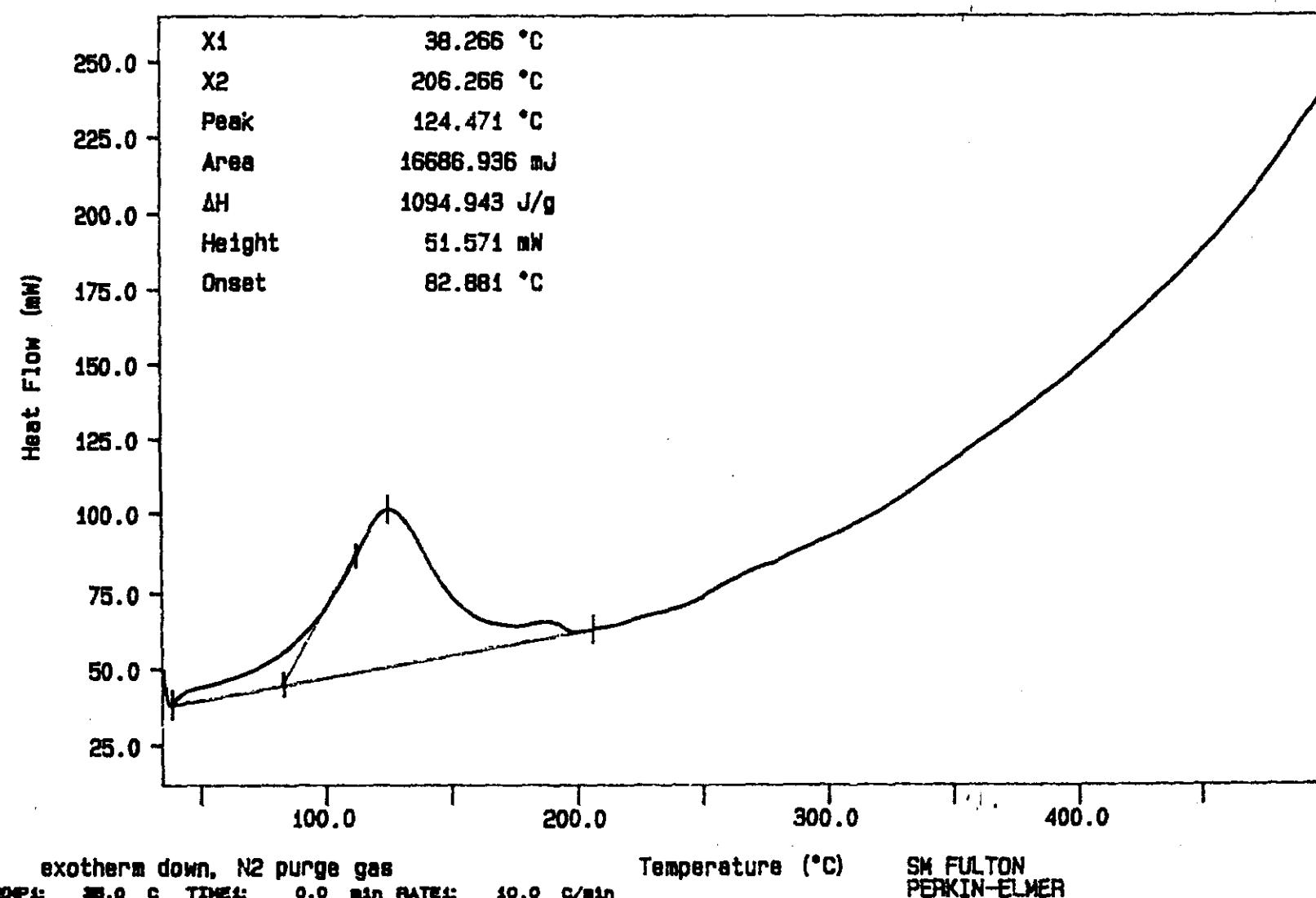
SM FULTON
PERKIN-ELMER7 Series Thermal Analysis System
Tue Apr 16 06:56:14 1996

Curve 1: DSC

File info: SAM041601 Tue Apr 16 09:20:00 1996

Sample Weight: 15.240 mg

S96T001119



SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Apr 16 09:21:52 1996

2009

→ → → MO-924 200W

WESTINGHOUSE

2509 372 2929

14:31

04/17/96

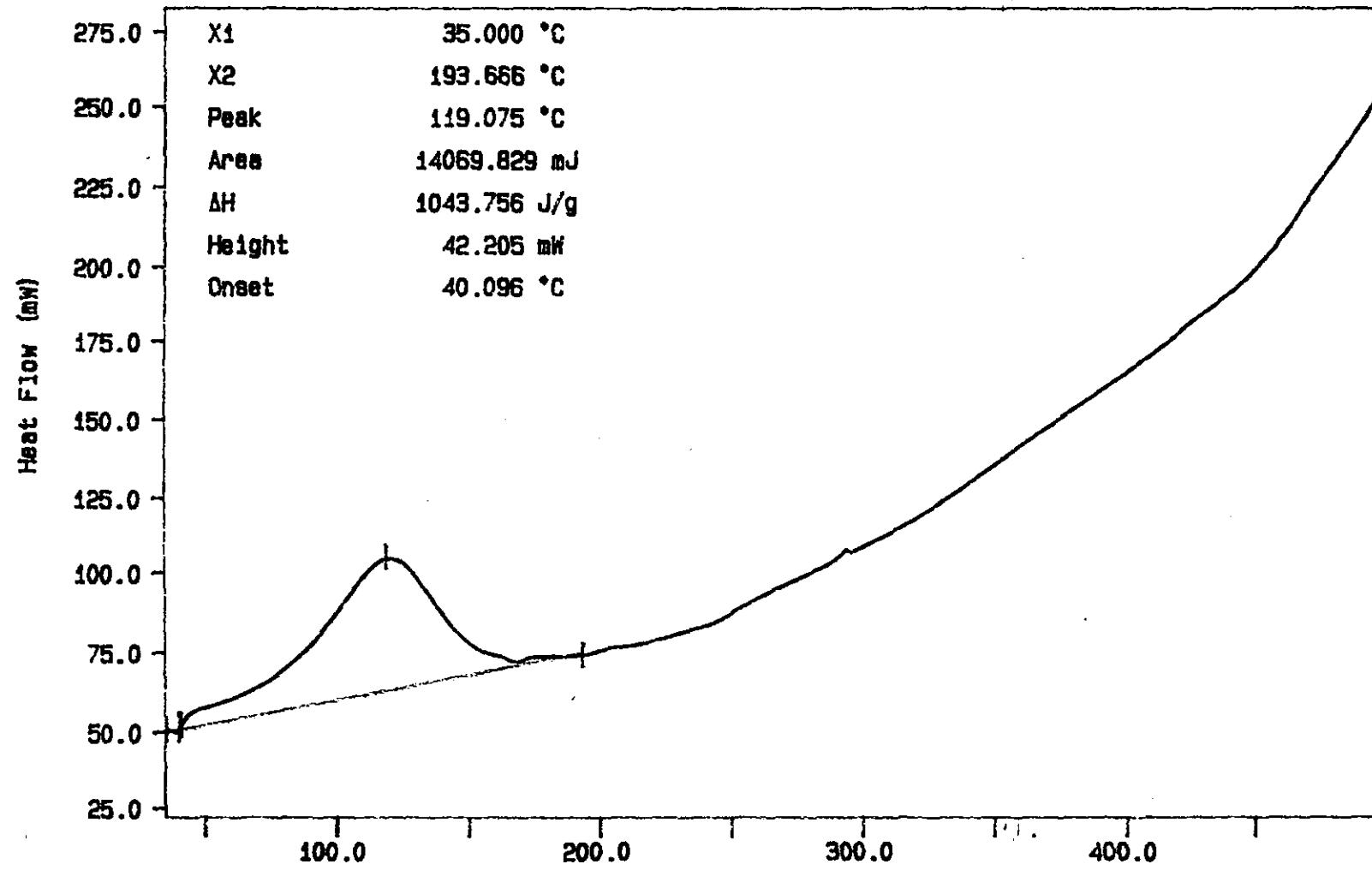
Curve 1: DSC

File info: SAM041602 Tue Apr 16 10:20:29 1996

Sample Weight: 13.480 mg

S96T001119 DUP

2-124



exotherm down, N₂ purge gas
TEMP: 25.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

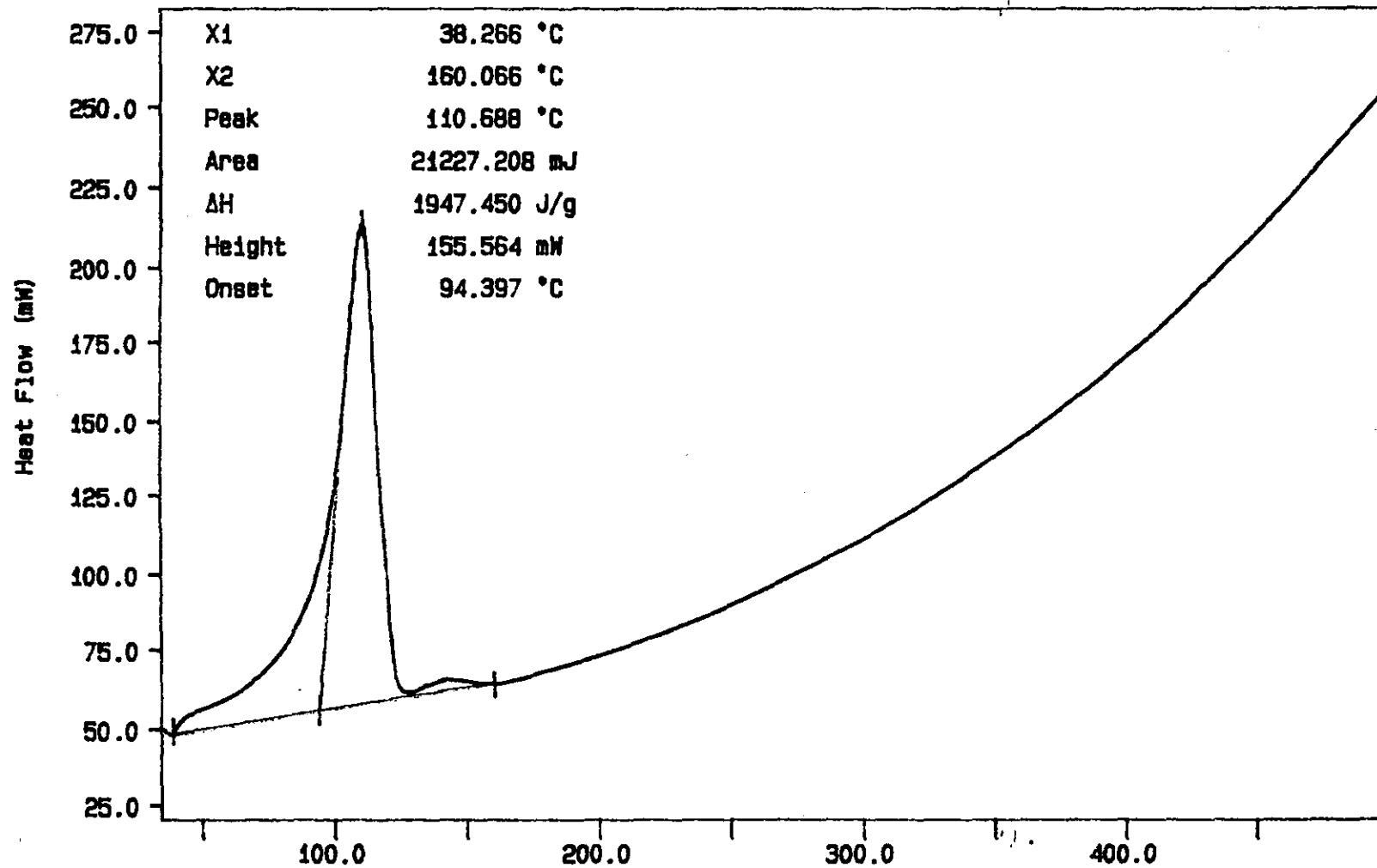
SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Apr 16 10:23:50 1996

Curve 1: DSC

File info: SAM041603 Tue Apr 16 11:28:17 1996

Sample Weight: 10.900 mg

S96T001120



exotherm down, N₂ purge gas
TEMP1: 35.0 °C TIME1: 0.0 min RATE1: 10.0 °C/min
TEMP2: 500.0 °C

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Apr 16 12:41:07 1996

011

Curve 1: DSC

File info: SAM041604 Tue Apr 16 13:38:49 1996

Sample Weight: 10.780 mg

S96T001120 DUP

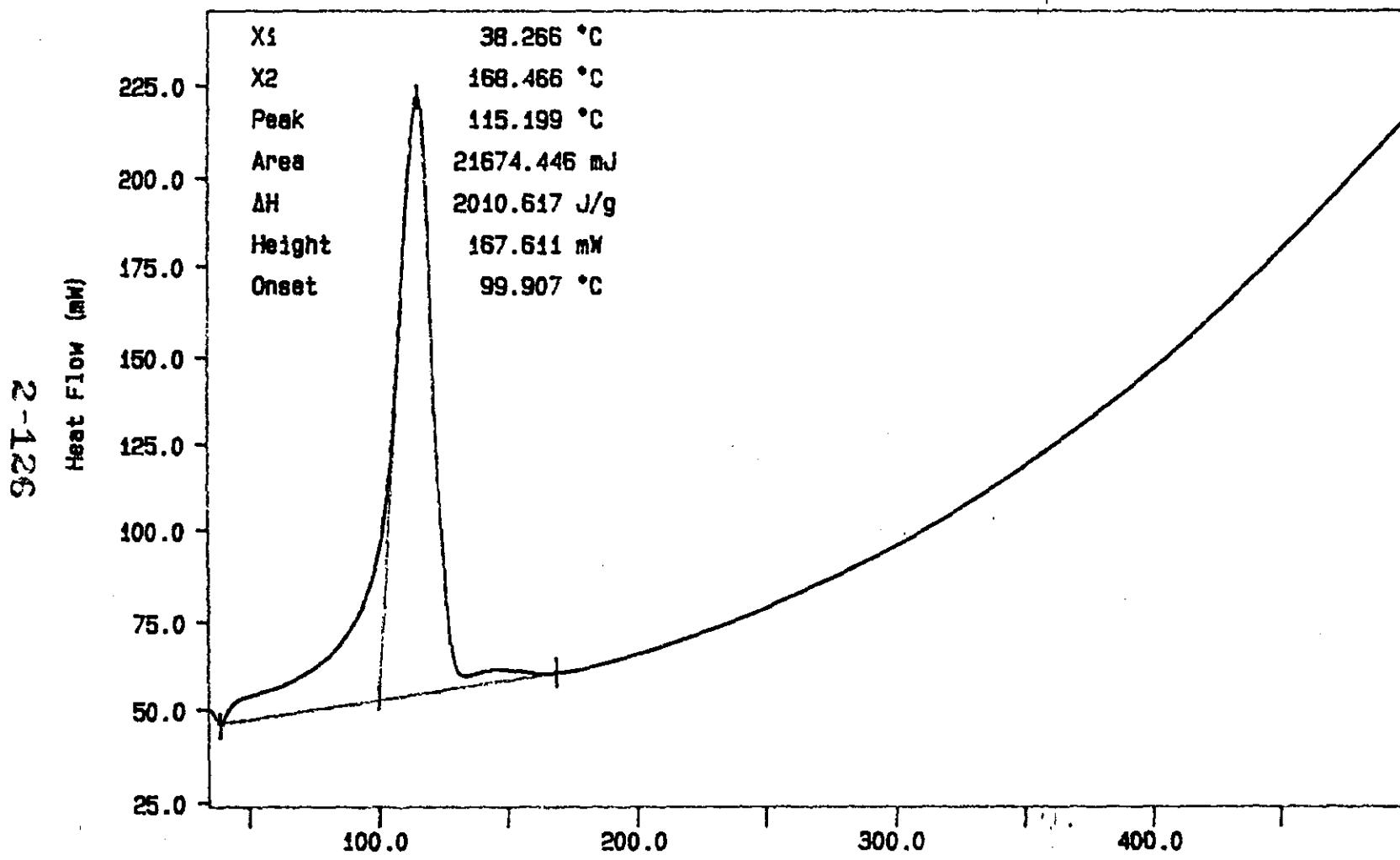
WESTINGHOUSE
++ MO-924 200W

WESTINGHOUSE

509 372 2929

14:32

04/17/96

exotherm down, N₂ purge gas

TEMP: 35.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Apr 16 13:43:28 1996

Q012

Curve 1: DSC

File info: SAM041605 Tue Apr 16 14:51:28 1996

Sample Weight: 10.430 mg

S96T001121

WESTINGHOUSE → MO-924 200W

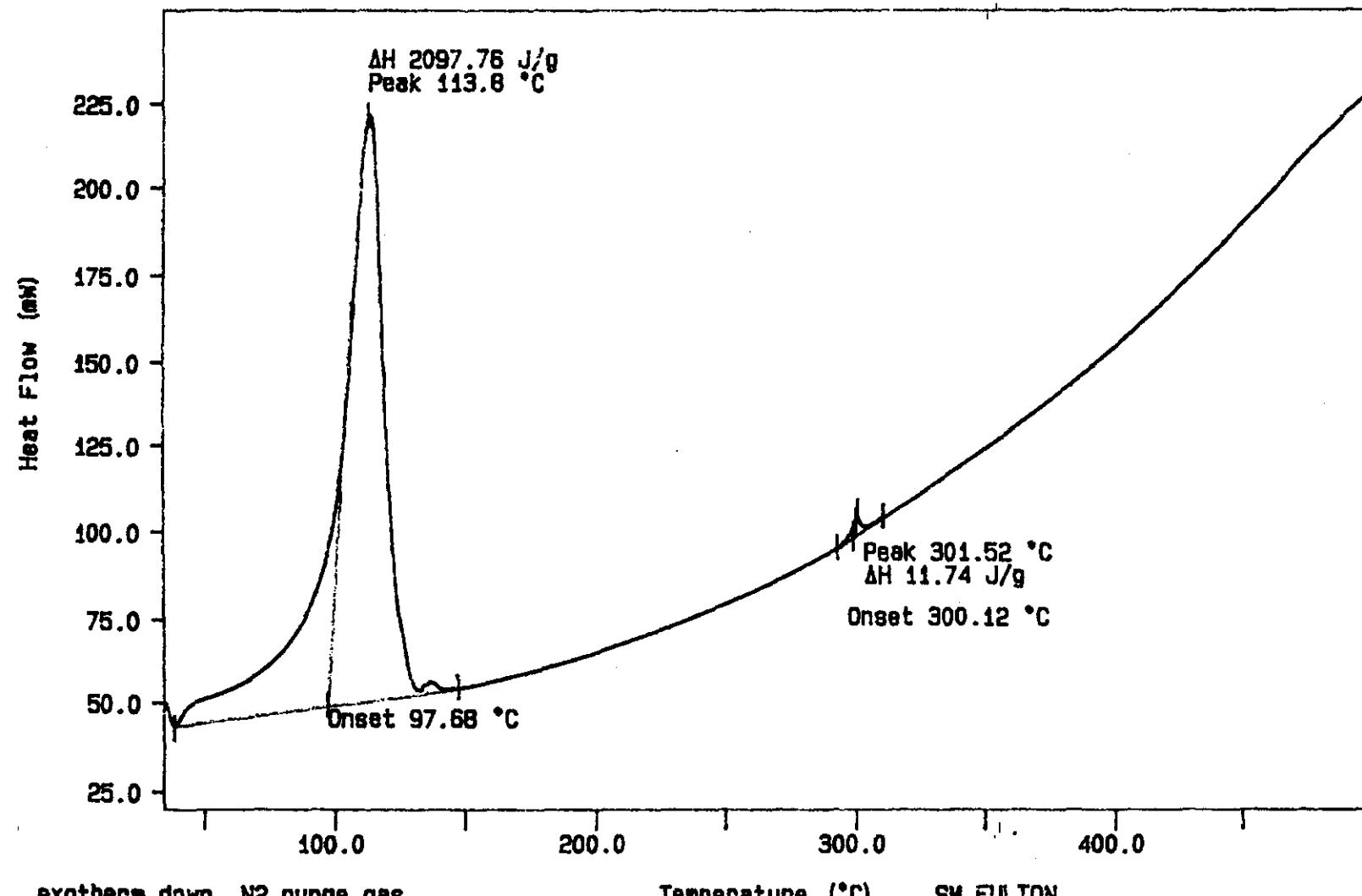
WESTINGHOUSE

©509 372 2929

14:33

04/17/96

2-A27



exotherm down, N₂ purge gas
TEMP1: 25.0 °C TIME1: 0.0 min RATE1: 10.0 °C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Apr 16 15:28:25 1996

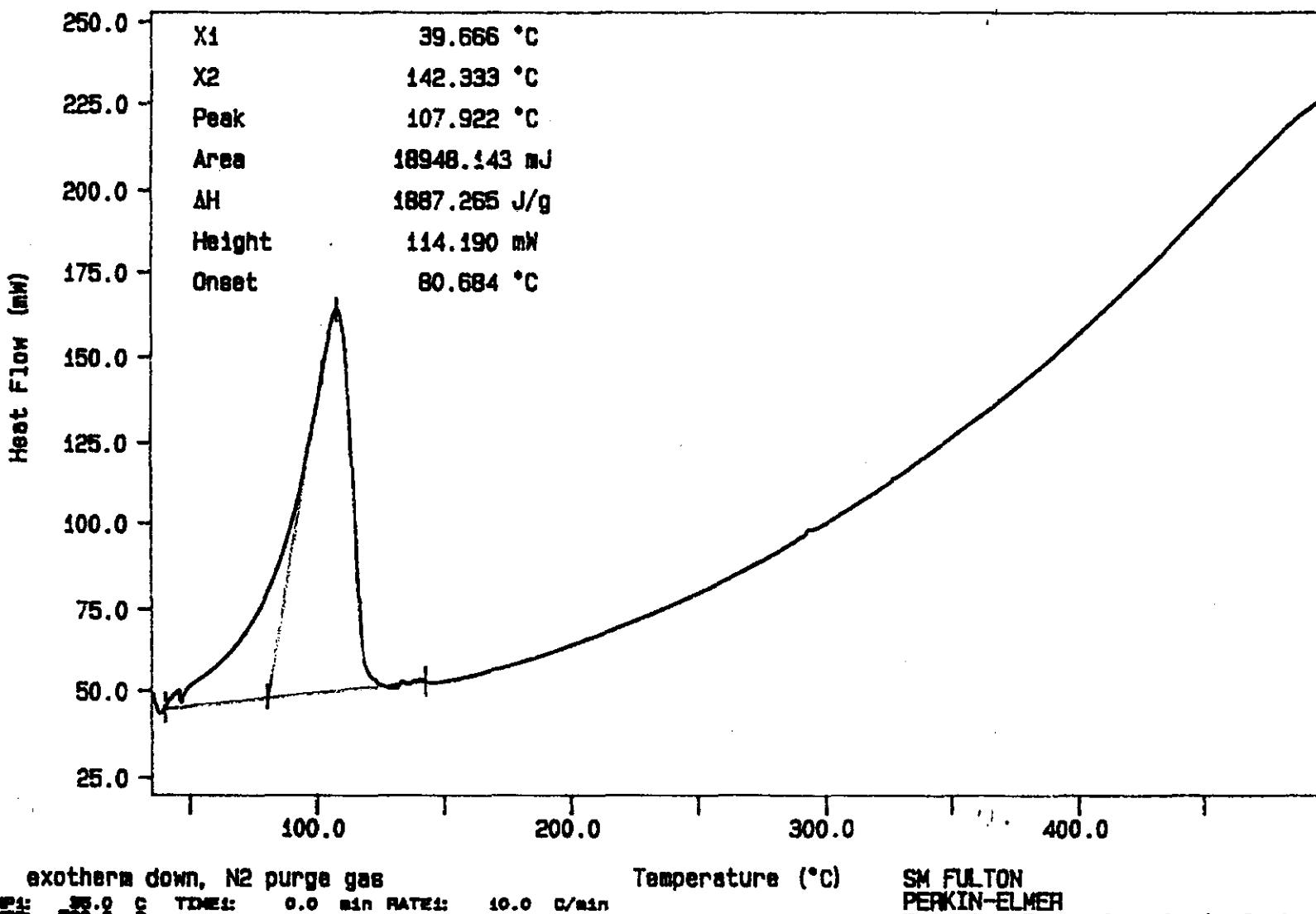
WHC-SD-WM-DR-184, REV. 1

Curve 1: DSC

File info: SAM041606 Tue Apr 16 16:27:03 1996

Sample Weight: 10.040 mg

S96T001121 DUP



04/17/96 14:33
04/09 372 2929
ACQUAINTANCE
477-477-477-477
0007

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Apr 16 16:28:32 1996

LABCORE Data Entry Template for Worklist#

8025

Analyst: KRM Instrument: DSC01 Book # 12N14BMethod: LA-514-113 Rev/Mod C-1

Worklist Comment: U-107, Run under Nitrogen. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		DSC-01	SOLID	<u>28.45</u>	<u>27.4</u>	*	Joules/g
96000422	U-107	2 SAMPLE	S96T001867 0	DSC-01	SOLID	<u>N/A</u>	<u>140.6</u>		Joules/g
96000422	U-107	3 DUP	S96T001867 0	DSC-01	SOLID	<u>140.6</u>	<u>105.2</u>	<u>N/A</u>	Joules/g
96000422	U-107	4 SAMPLE	S96T001873 0	DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
		5 STD		DSC-01	SOLID	<u>28.45</u>	<u>30.3</u>	*	Joules/g
96000422	U-107	6 DUP	S96T001873 0	DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 8025See Attached for Signatures

Analyst Signature

Date

Analyst Signature

Date

Validated by Hanastos 5-13-96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist#

8025

Analyst: KRM Instrument: DSC0 Book # 12N14BMethod: LA-514-113 Rev/Mod C-1

Worklist Comment: U-107, Run under Nitrogen. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		DSC-01	SOLID			N/A	Joules/g
96000422	U-107	2 SAMPLE	S96T001867 0	DSC-01	SOLID	N/A			Joules/g
96000422	U-107	3 DUP	S96T001867 0	DSC-01	SOLID			N/A	Joules/g
96000422	U-107	4 SAMPLE STD	S96T001873 0	DSC-01	SOLID	N/A			Joules/g
96000422	U-107	5 DUP	S96T001873 0	DSC-01	SOLID			N/A	Joules/g

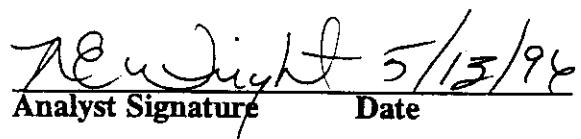
Final page for worklist # 8025



Analyst Signature

5-7-96

Date



Analyst Signature

5/13/96

Date

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 913 TO 914

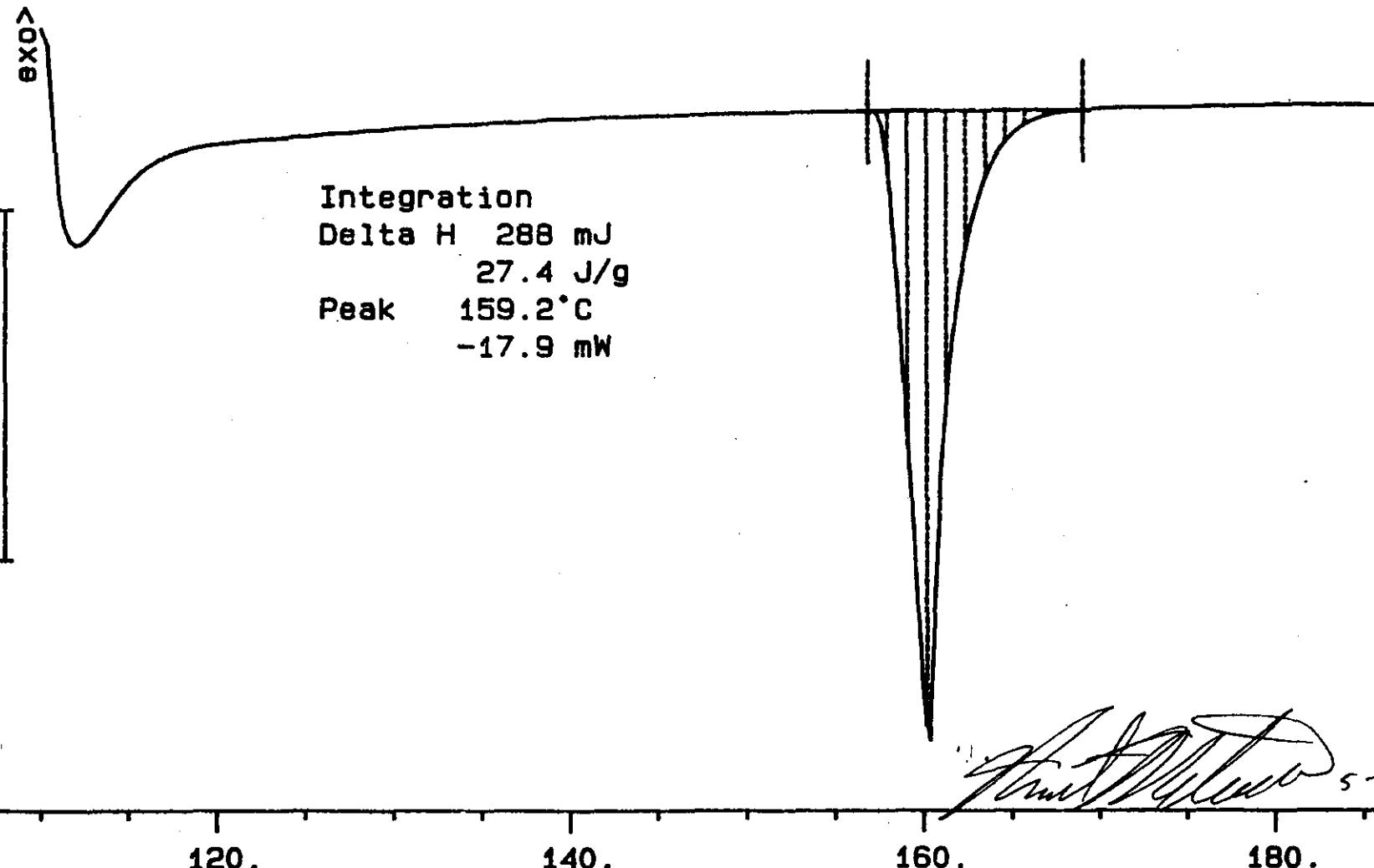
DSC STD 12N14-B

10.500 mg

Rate: 10.0 °C/min

File: 00039.001 DSC METTLER 07-May-96

Ident: 0.0 222-S Laboratory



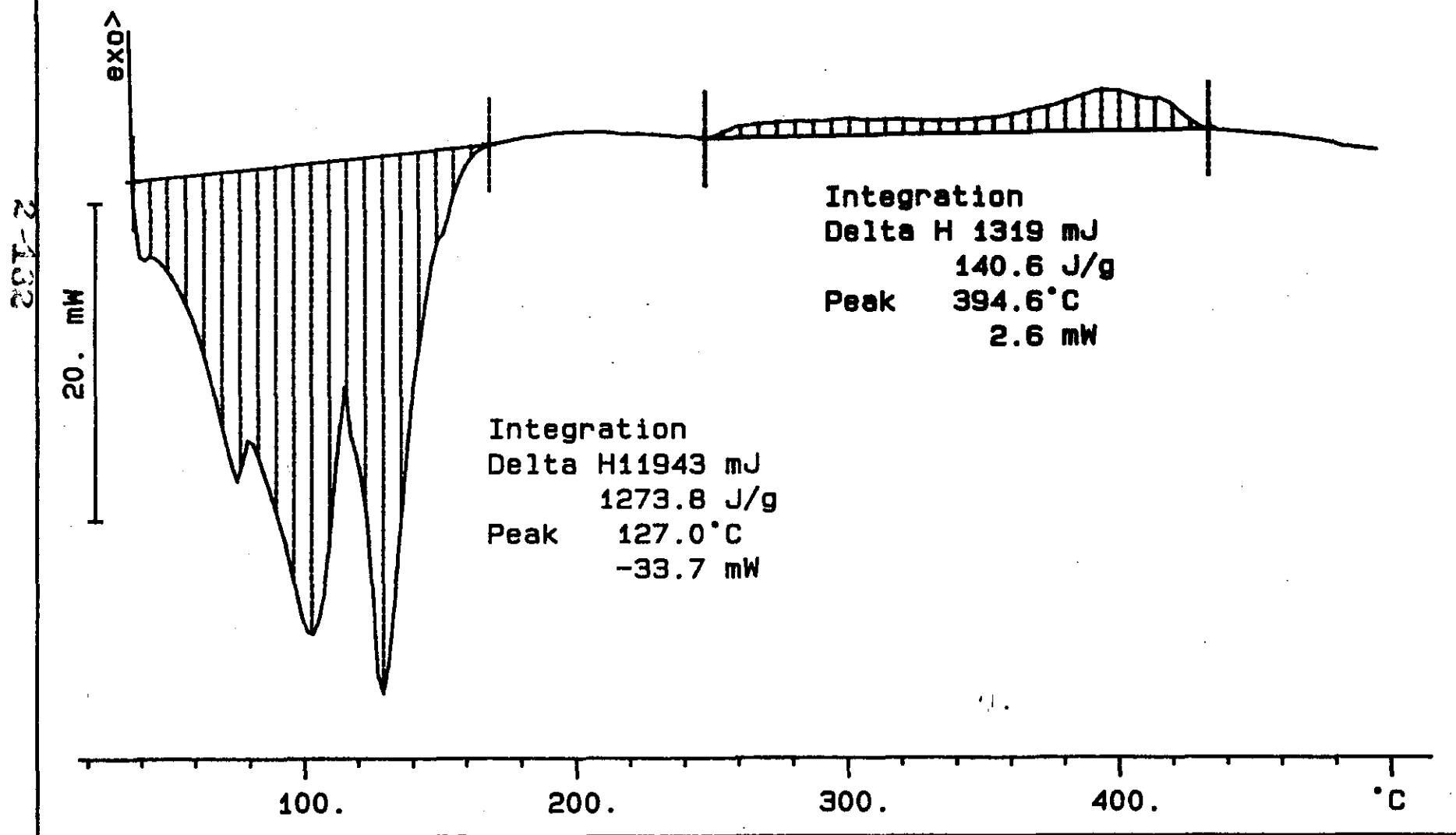
S96T001867 N2

9.376 mg

Rate: 10.0 °C/min

File: 00045.001 DSC METTLER 08-May-96

Ident: 0.0 222-S Laboratory



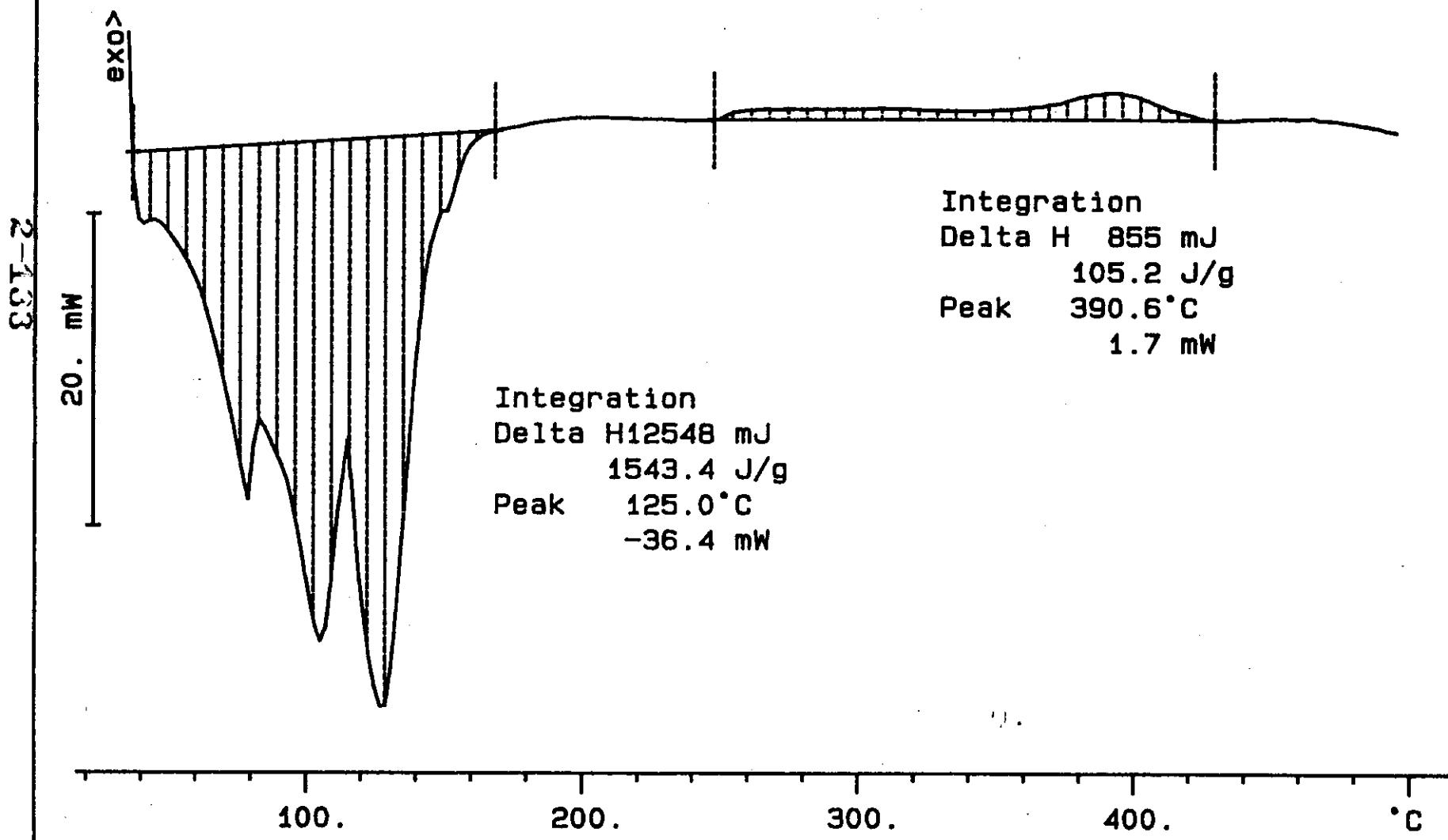
S96T001867 DUP N2

8.130 mg

Rate: 10.0 °C/min

File: 00047.001 DSC METTLER 08-May-96

Ident: 0.0 222-S Laboratory



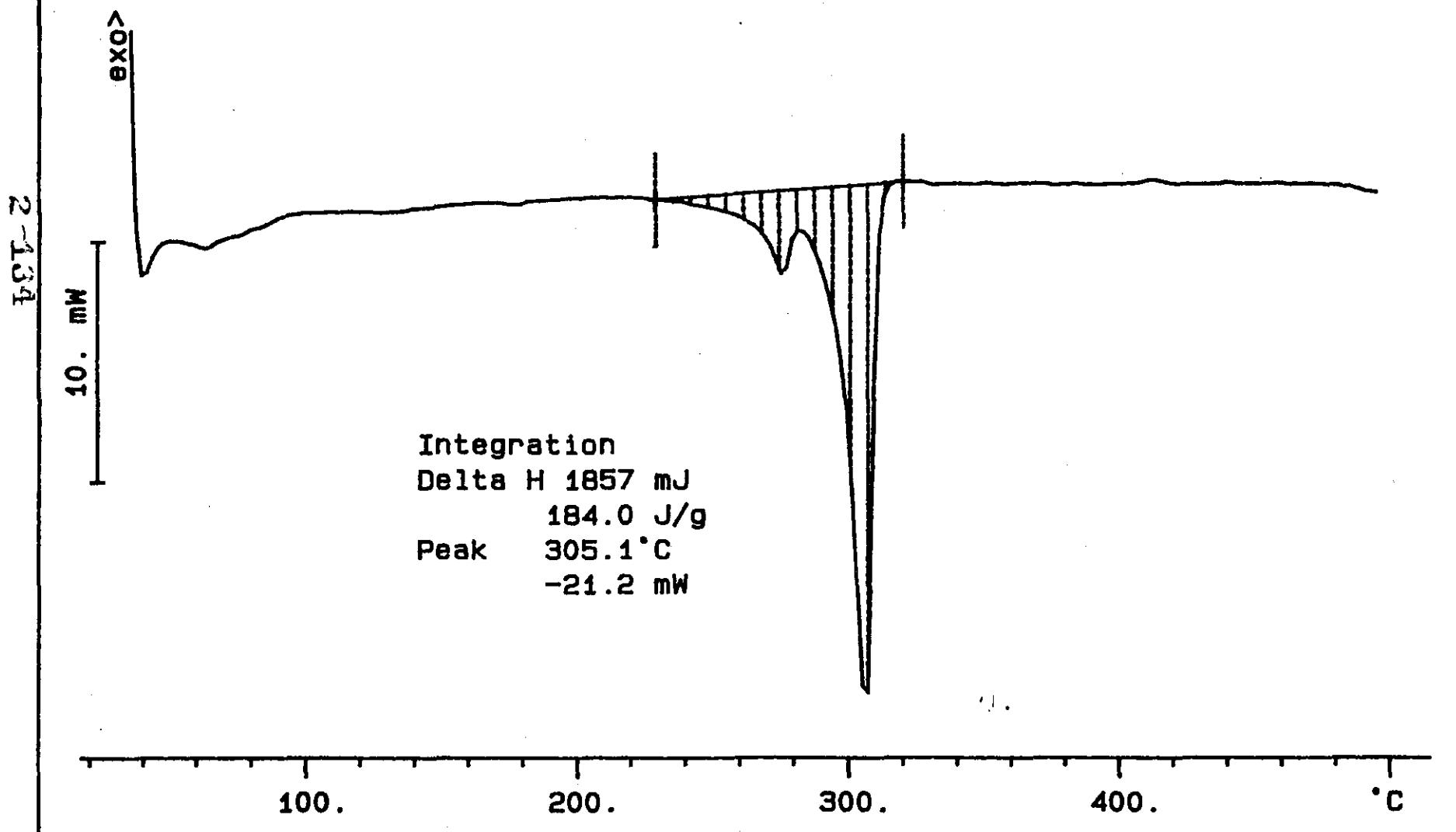
S96T001873 N2

10.091 mg

Rate: 10.0 °C/min

File: 00049.001 DSC METTLER 08-May-96

Ident: 0.0 222-S Laboratory



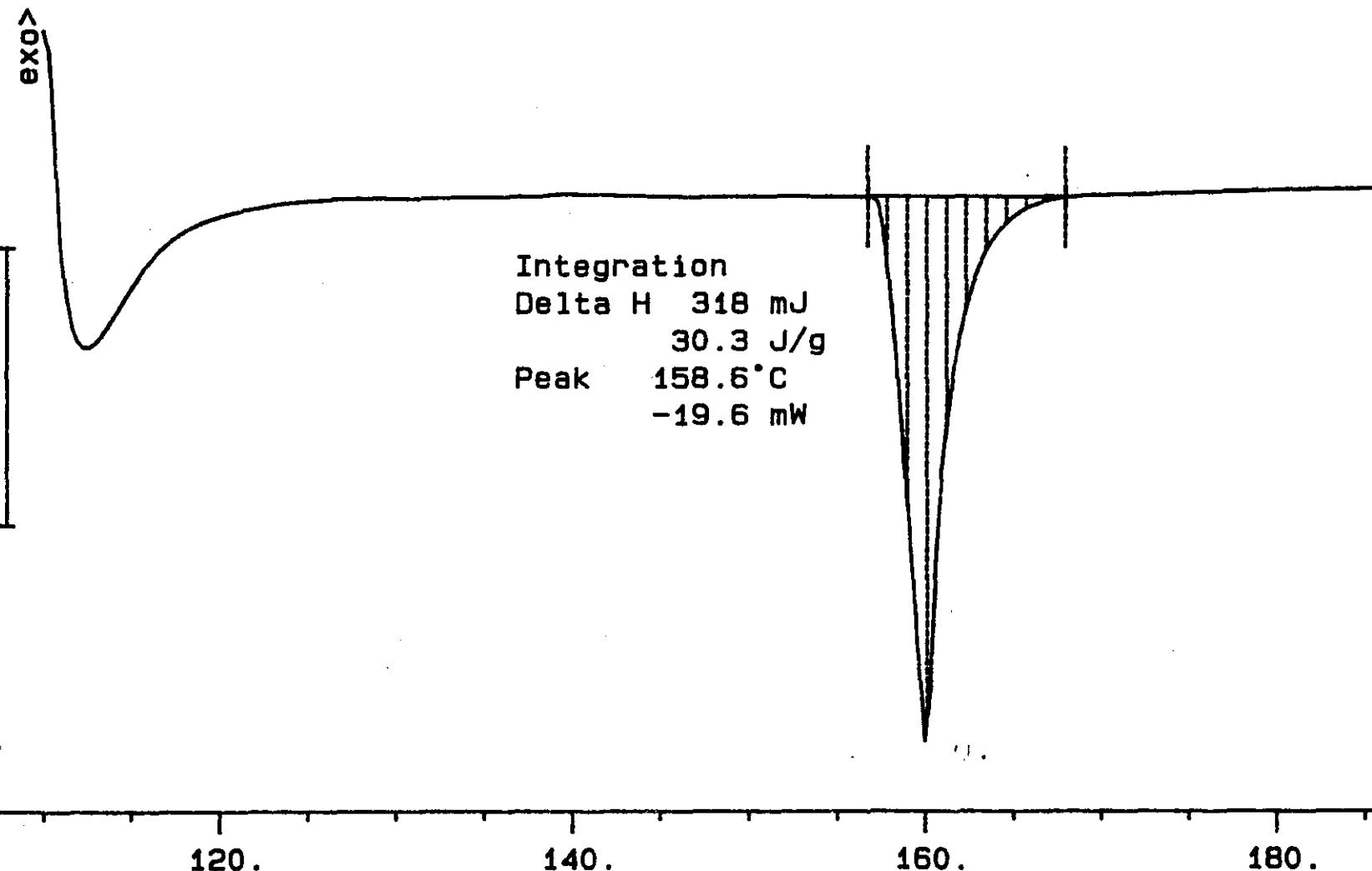
DSC STD 12N14-B

10.500 mg

Rate: 10.0 °C/min

File: 00050.001 DSC METTLER 08-May-96

Ident: 0.0 222-S Laboratory



S96T001873 DUP N2

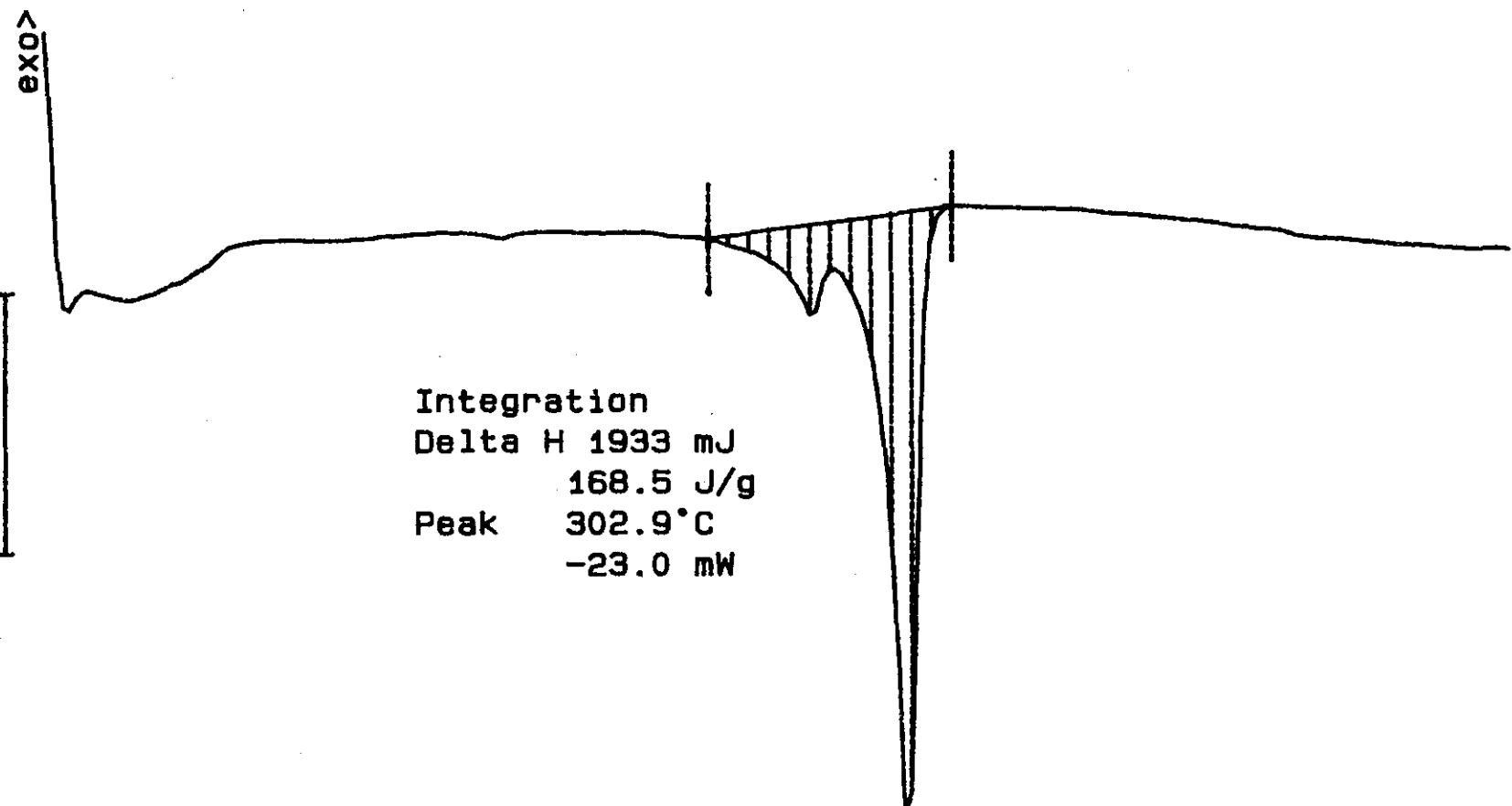
11.469 mg

Rate: 10.0 °C/min

File: 00060.001 DSC METTLER 09-May-96

Ident: 0.0 222-S Laboratory

2-136



100.

200.

300.

400.

• C

LABCORE Data Entry Template for Worklist#

8229

Analyst: ADP

Instrument: DSC01

Book # 12 N 14 B

Method: LA-514-113 Rev/Mod C-1

Worklist Comment: U-107. Run under nitrogen. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		DSC-01	LIQUID	28.45	31.5*	N/A	Joules/g
96000126	U-107	2 SAMPLE	S96T002034 0	DSC-01	LIQUID	N/A	Ø		Joules/g
96000126	U-107	3 DUP	S96T002034 0	DSC-01	LIQUID	Ø	Ø	N/A	Joules/g

Final page for worklist #

8229

Anthony Parent
Analyst Signature

5-12-96
Date

Tom Hamm
Analyst Signature

5-13-96
Date

Validated by Hanastin 5-14-96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

2-137

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2138 TO 2140

DSC STD 12N14-B N2

10.500 mg

Rate: 10.0 °C/min

File: 00007.001

Ident: 0.0

DSC METTLER

12-May-96

222-S Laboratory

N-138

< exo

20. mW

Integration
Delta H 331 mJ
31.5 J/g
Peak 158.5 °C
-21.7 mW

120.

140.

160.

180. °C

Calibrated 5-12-96

WHC-SD-WM-DD-94, Rev. 1

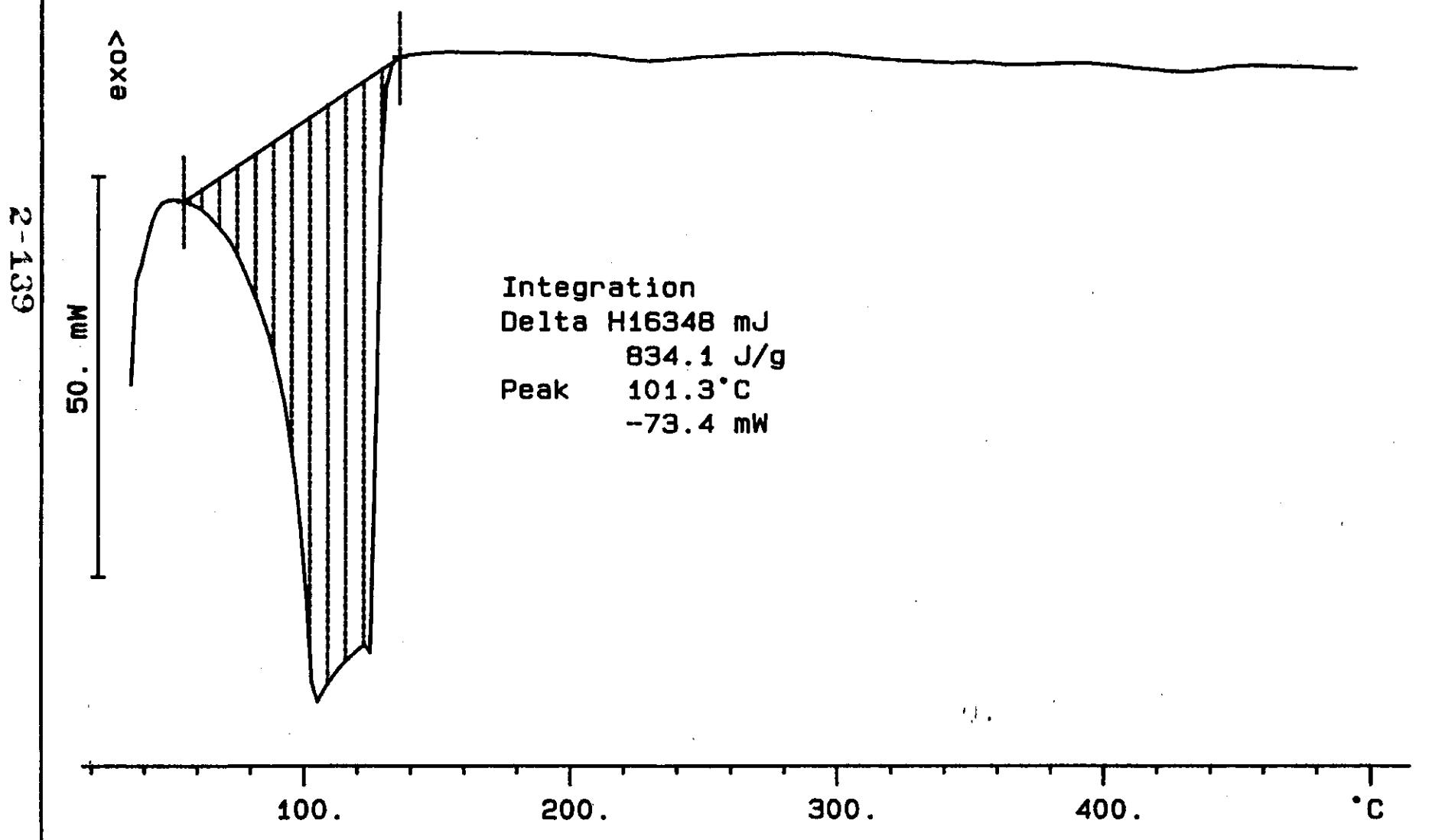
S96T002034 SAM N2

19.600 mg

Rate: 10.0 °C/min

File: 00012.001 DSC METTLER 12-May-96

Ident: 0.0 222-S Laboratory



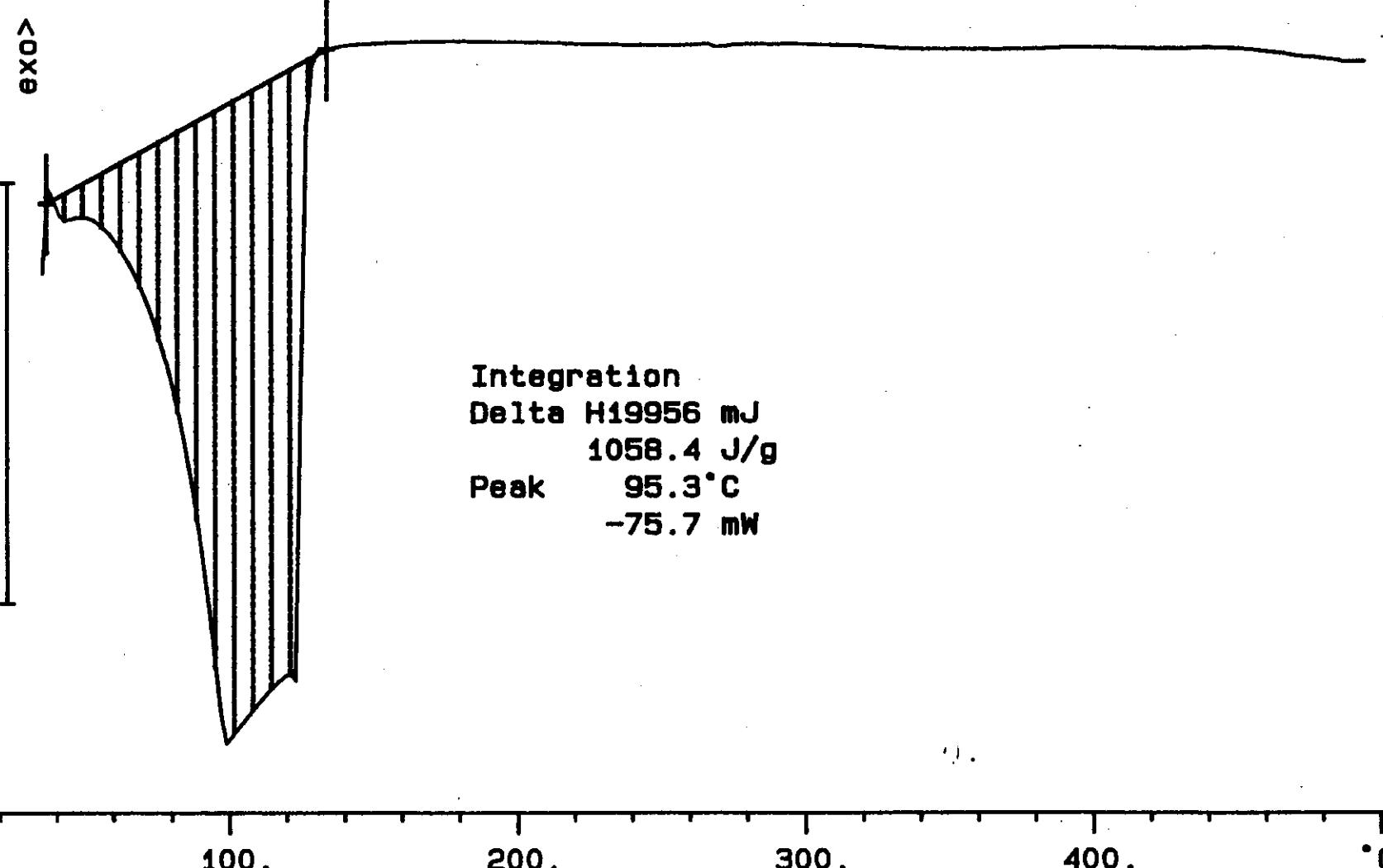
S96T002034 DUP N2

18.855 mg

Rate: 10.0 °C/min

File: 00013.001 DSC METTLER 12-May-96

Ident: 0.0 222-S Laboratory



LABCORE Data Entry Template for Worklist#

8230

Analyst: ADP Instrument: DSC0 3 Book # 12N14BMethod: LA-514-114 Rev/Mod C-1

Worklist Comment: U-107. Run under nitrogen. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		DSC-03	SOLID	<u>28.45</u>	<u>29.20</u>	N/A	Joules/g
96000422	U-107	2 SAMPLE	S96T001874 0	DSC-03	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
96000422	U-107	3 DUP	S96T001874 0	DSC-03	SOLID	<u>Ø</u>	<u>Ø</u>	N/A	Joules/g

Final page for worklist # 8230See attached for signatures

Analyst Signature Date 5-21-96

KEWight 5/21/96
Analyst Signature DateValidated by Ahnastor 5-22-96
BBY

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

2-141

LABCORE Data Entry Template for Worklist#

8230

Analyst: ADP Instrument: DSC0 3 Book # 12N14BMethod: LA-514-113 Rev/Mod C-1

Worklist Comment: U-107. Run under nitrogen, new

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID		N/A	Joules/g
96000422	U-107	2 SAMPLE	S96T001874 0		DSC-01	SOLID	N/A		Joules/g
96000422	D-107	3 DUP	S96T001874 0		DSC-01	SOLID		N/A	Joules/g

Final page for worklist # 8230Arthur Parente 5-16-96
Analyst Signature Date

Analyst Signature Date

Other instrument was used.

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Curve 1: DSC

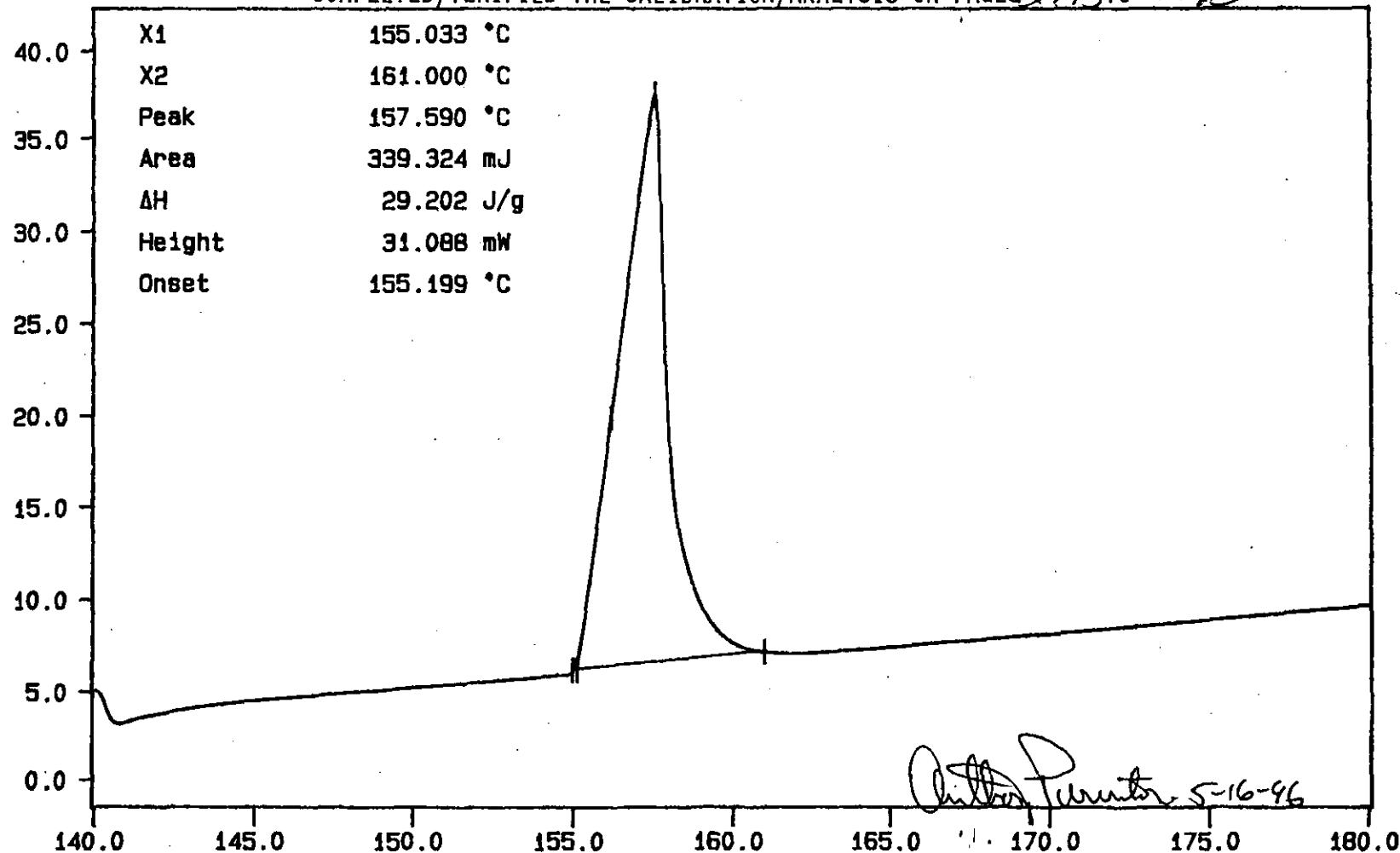
File info: IND051603 Thu May 16 22:33:50 1996

Sample Weight: 11.620 mg

12N14-B INDIUM AT 10C\MIN

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2443 TO 2-145

2-143



N2, EXOTHERM DOWN

TEMP1: 140.0 °C TIMES: 0.0 min RATE1: 10.0 °C/min

Temperature (°C)

AD PURINTON

PERKIN-ELMER

7 Series Thermal Analysis System
Thu May 16 22:39:44 1996

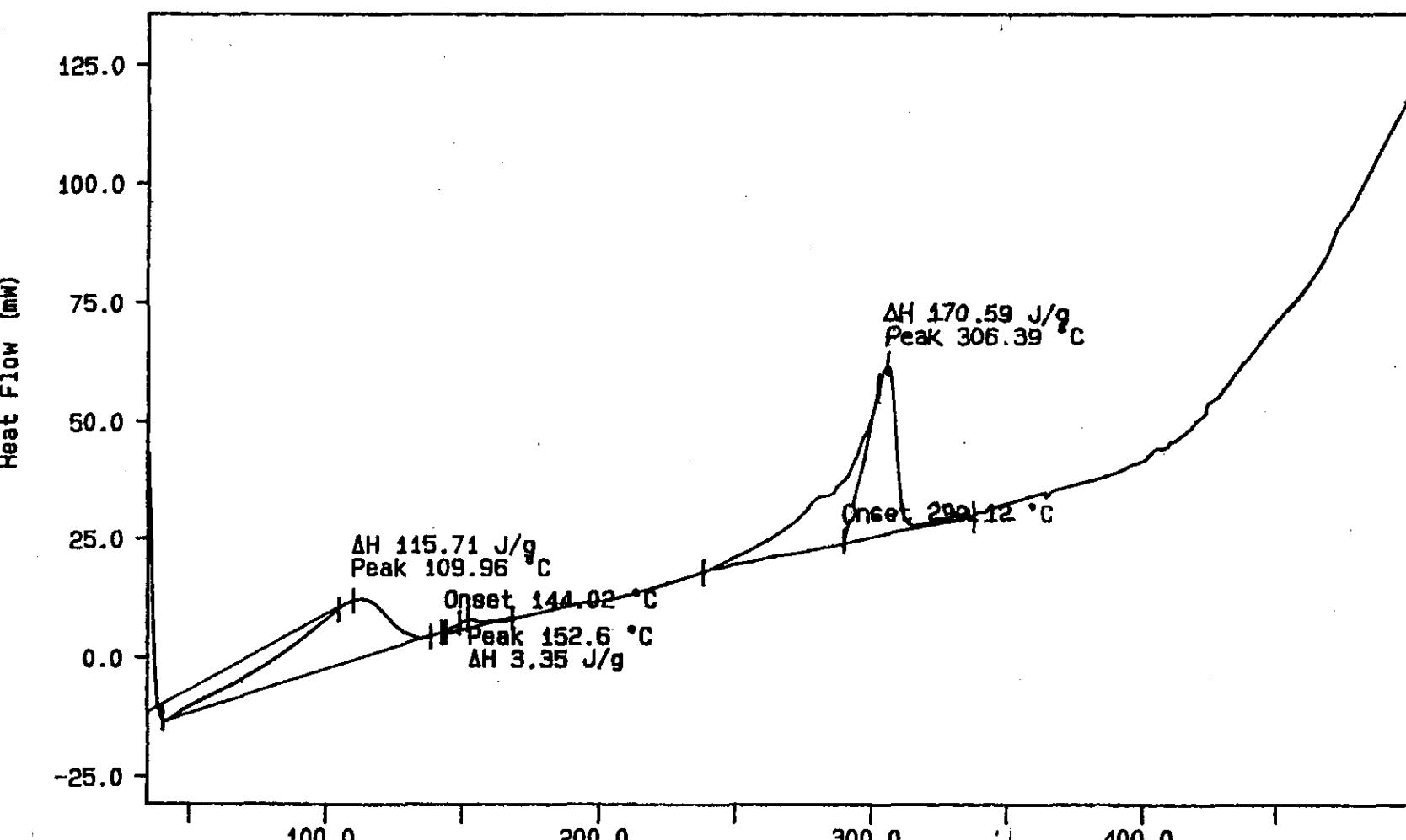
Curve 1: DSC

File info: SAM051601 Thu May 16 23:51:23 1996

Sample Weight: 28.110 mg

S96T001874 SAM

2-144



exotherm down, N2 purge gas
TEMP1: 20.0 °C TIME1: 0.0 min RATE1: 10.0 °C/min
TEMP2: 500.0 °C

Temperature (°C)

AD PURINTON
PERKIN-ELMER
7 Series Thermal Analysis System
Thu May 16 23:58:47 1996

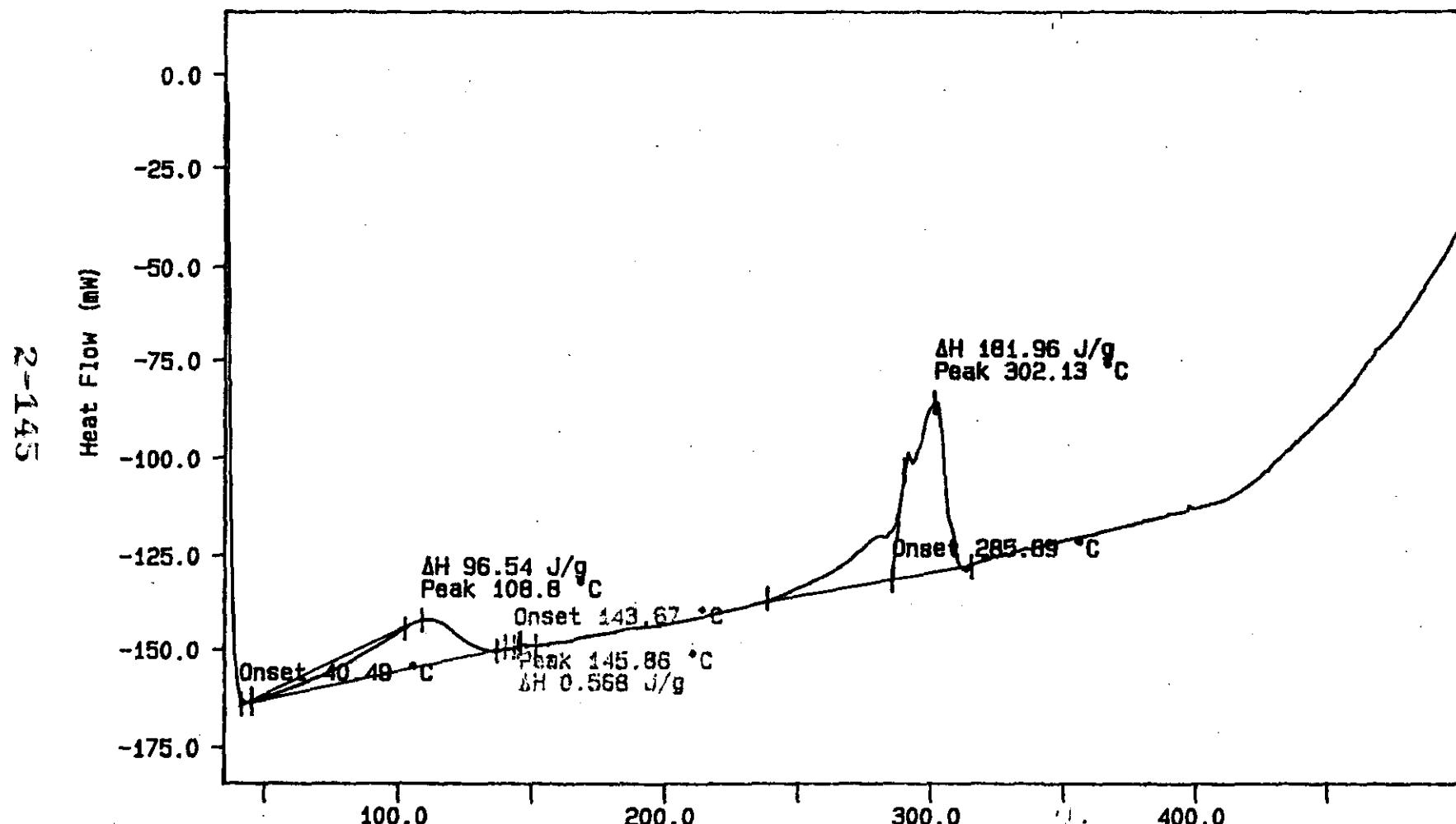
WHC-SD-WM-DP-184, REV. 1

Curve i: DSC

File info: SAM051602 Fri May 17 01:00:20 1996

Sample Weight: 30.990 mg

S96T001874 SAM



exotherm down, N₂ purge gas

TEMP: 25.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

AD PURINTON

PERKIN-ELMER

7 Series Thermal Analysis System

Fri May 17 01:02:48 1996

WHC-SD-WM-DP-184, REV. 1

LABCORE Data Entry Template for Worklist#

8245

Analyst: ADP Instrument: DSC0 71
 Method: LA-514-113 Rev/Mod C-1 Book # 12N14B

Worklist Comment: U-107. Run under nitrogen. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		DSC-01	SOLID	<u>28.45</u>	<u>29.8</u>	<u>N/A</u>	Joules/g
96000422	U-107	2 SAMPLE	S96T002132 0	DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
96000422	U-107	3 DUP	S96T002132 0	DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist #

8245

See attached for signatures

Analyst Signature

Date

5-21-96
BDV

Analyst Signature

Date

Validated by Analyst 5.22.96

Data Entry Comments:

The second endotherm on the thermogram
may be due to Aluminum Hydroxide.

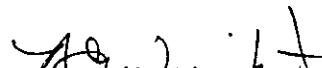
LABCORE Data Entry Template for Worklist#**8245**Analyst: APD Instrument: DSC0 Book # 12N14BMethod: LA-514-113 Rev/Mod C-1

Worklist Comment: U-107. Run under nitrogen, new

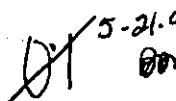
GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		DSC-01	SOLID			N/A	Joules/g
96000422	U-107	2 SAMPLE	S96T002131 0	DSC-01	SOLID	N/A			Joules/g
96000422	U-107	3 DUP	S96T002131 0	DSC-01	SOLID			N/A	Joules/g
96000422	U-107	4 SAMPLE	S96T002132 0	DSC-01	SOLID	N/A			Joules/g
96000422	U-107	5 DUP	S96T002132 0	DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 8245

Arthur Parente 05-15-96
 Analyst Signature Date


Michael J. Wright 5/21/96
 Analyst Signature Date

S96T002131 moved to WL# 9028


 5-21-96
 M.J.W.

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

2-147

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2148 TO 2150

DSC STD 12N14B

10.500 mg

Rate: 10.0 °C/min

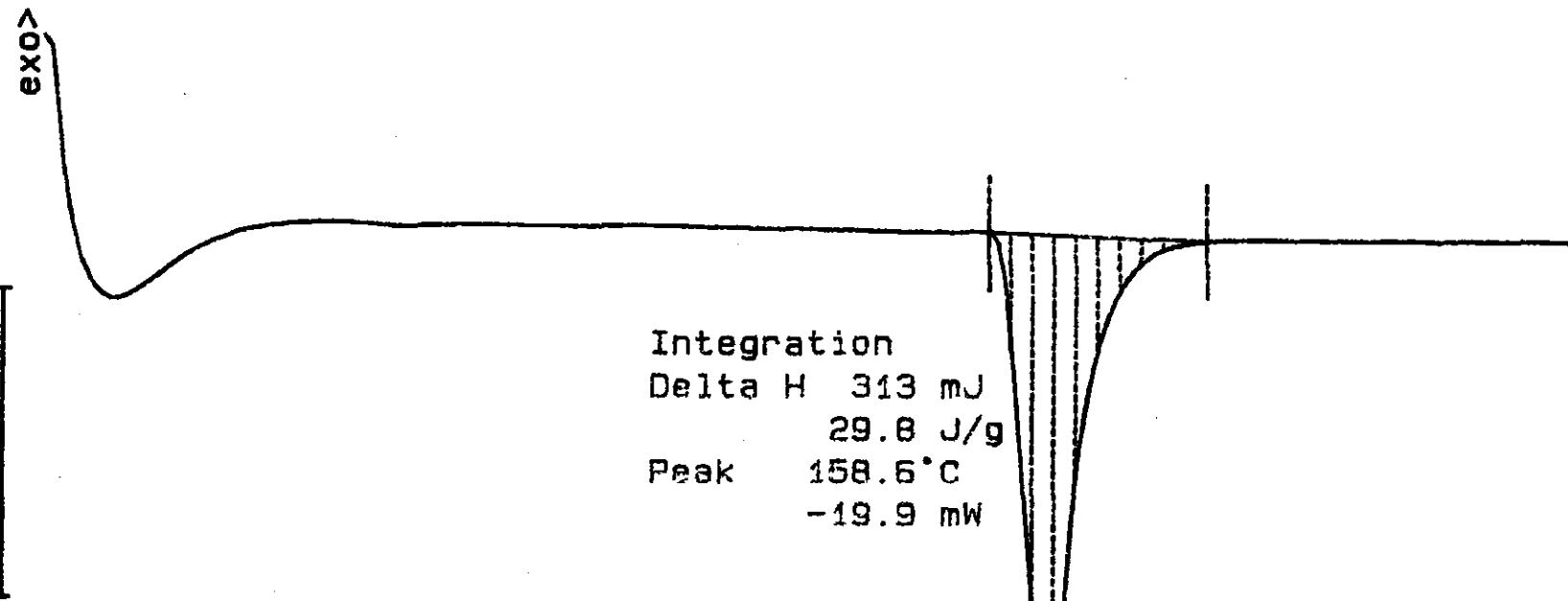
File: 00043.001

Ident: 0.0

DSC METTLER

16-May-96

222-S Laboratory



WHC-SD-WM-DP-184, REV. 1

[Signature] 05/15/96

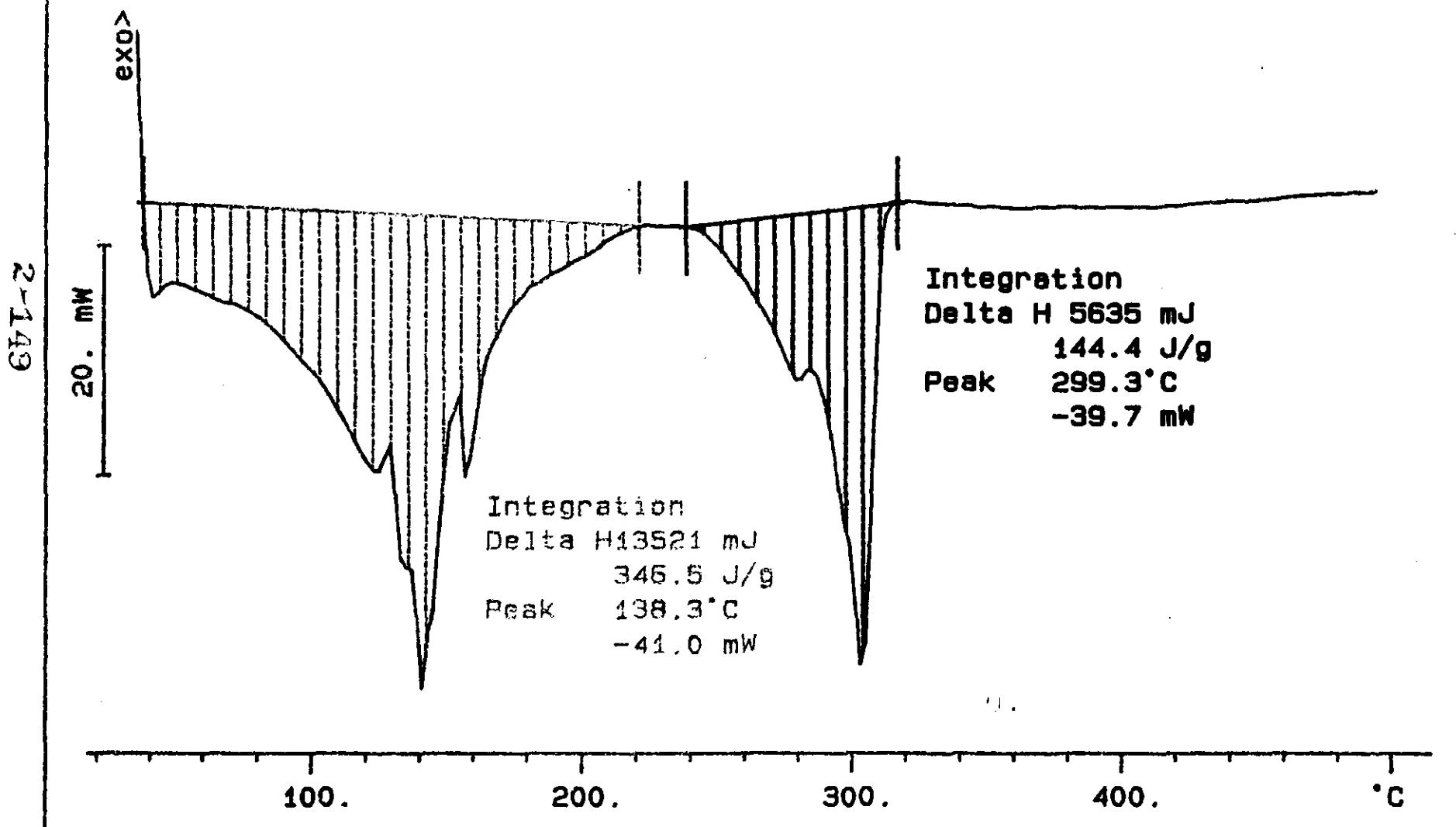
S96T002132 N2

39.023 mg

Rate: 10.0 °C/min

File: 00044.001 DSC METTLER 15-May-96

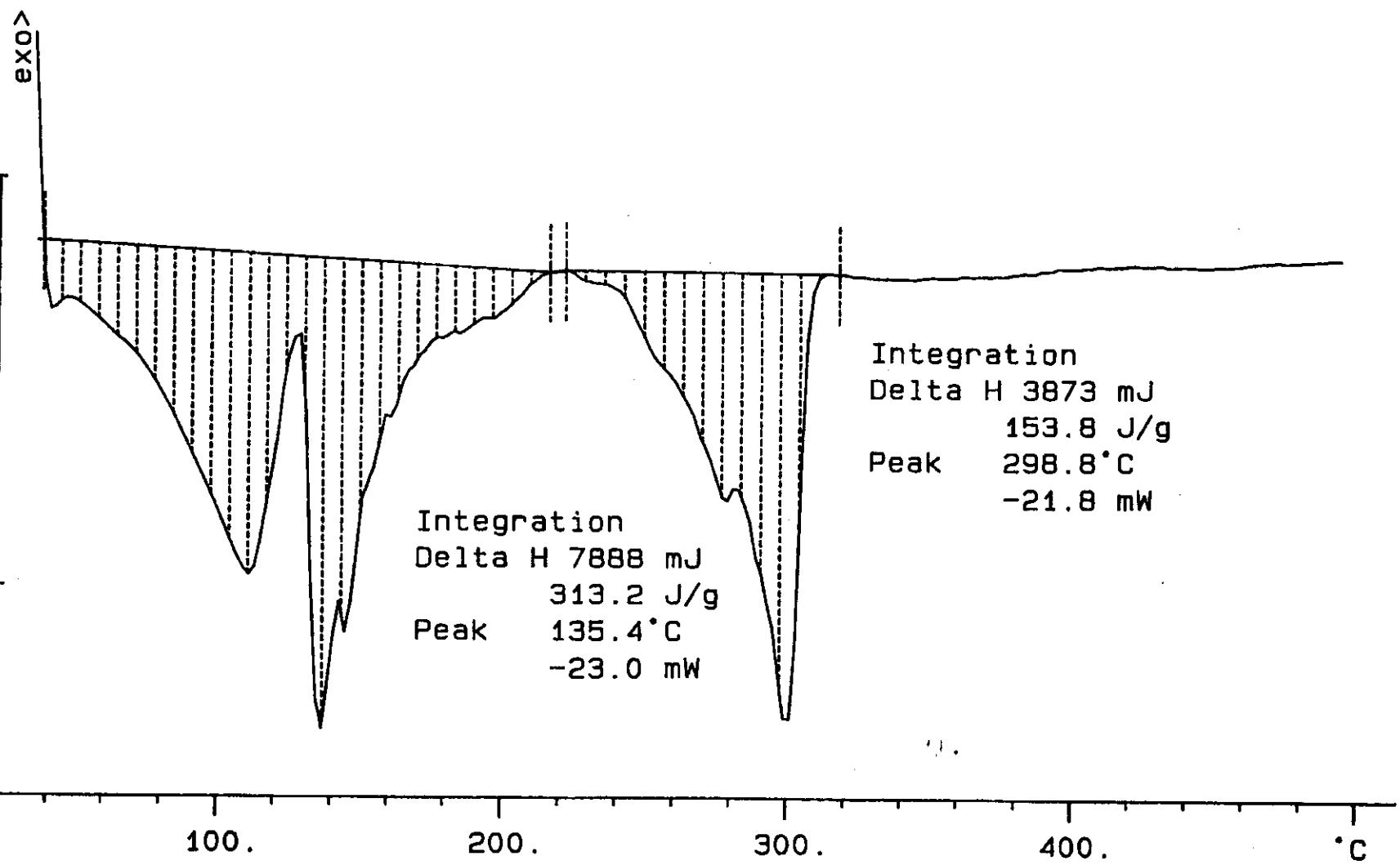
Ident: 0.0 222-S Laboratory



S96T002132 DUP N2

25.183 mg

Rate: 10.0 °C/min

File: 00045.001 DSC METTLER 15-May-96
Ident: 0.0 222-S Laboratory

LABCORE Data Entry Template for Worklist#

8437

Analyst: KRM Instrument: DSC0 | _____ Book # 12N14BMethod: LA-514-113 Rev/Mod C-1

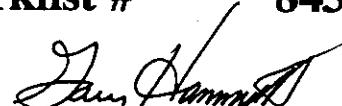
Worklist Comment: U-107 DSC RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		DSC-01	LIQUID	<u>28.45</u>	<u>30.3</u>	<u>N/A</u>	Joules/g
96000422	U-107	2 SAMPLE	S96T002140 0	DSC-01	LIQUID	<u>N/A</u>	<u>256.4</u>		Joules/g
96000422	U-107	3 DUP	S96T002140 0	DSC-01	LIQUID	<u>256.4</u>	<u>274.3</u>	<u>N/A</u>	Joules/g
96000422	U-107	4 SAMPLE	S96T002141 0	DSC-01	LIQUID	<u>N/A</u>	<u>296.2</u>	"	Joules/g
96000422	U-107	5 DUP	S96T002141 0	DSC-01	LIQUID	<u>296.2</u>	<u>273.3</u>	<u>N/A</u>	Joules/g

Final page for worklist # 8437

 Analyst Signature

Date 5-8-96

 Analyst Signature

Date 5-13-96

Validated by Analyst 5-14-96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES ~~2452 TO~~ ²¹⁵⁶

DSC STD 12N14-B

10.500 mg

Rate: 10.0 °C/min

File: 00050.001 DSC METTLER 08-May-96

Ident: 0.0 222-S Laboratory

exo

2-152
10. mW

Integration
Delta H 318 mJ
30.3 J/g
Peak 158.6 °C
-19.6 mW

120. 140. 160. 180. °C

Mark Miller 5-8-96

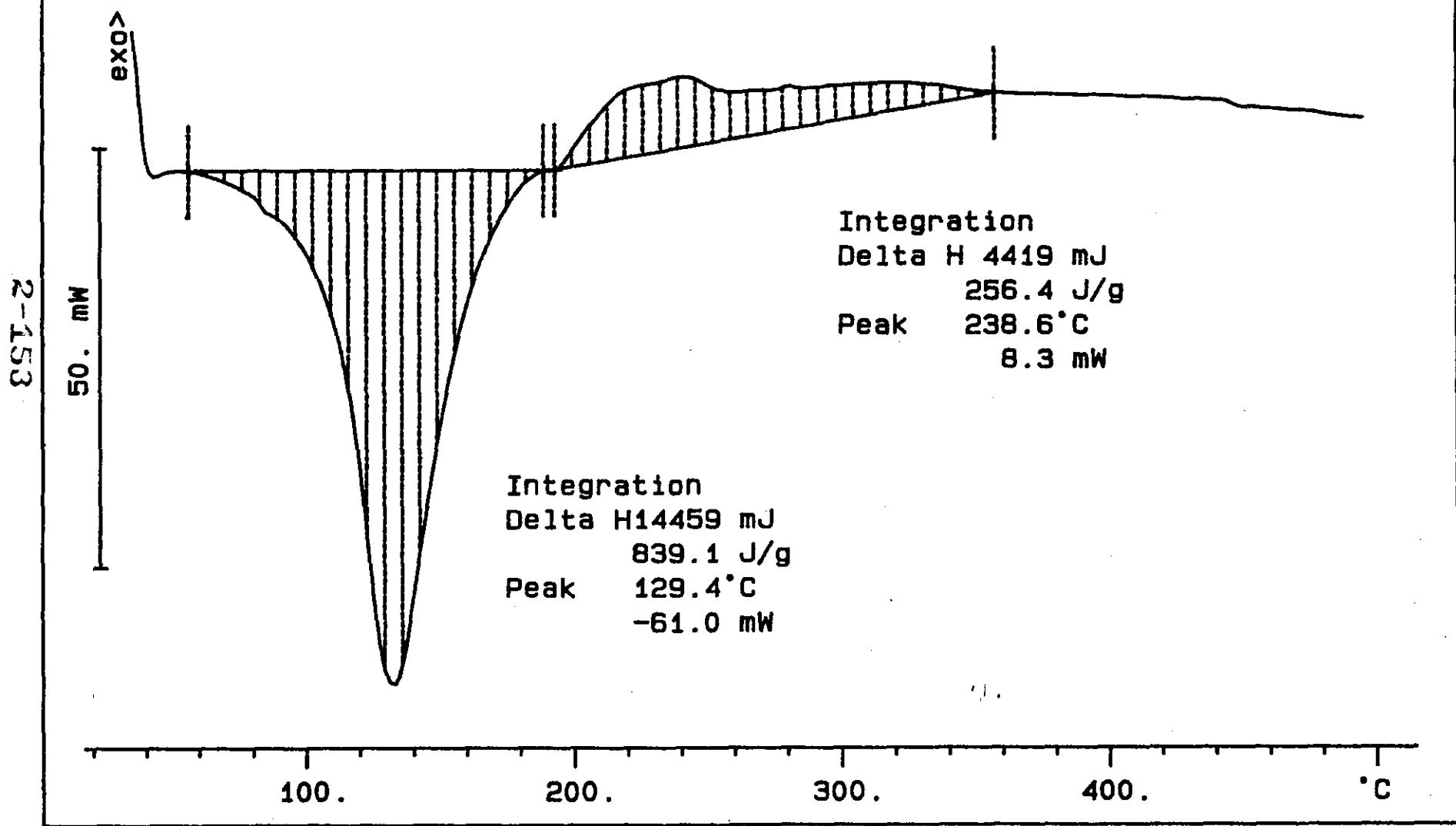
S96T002140 N2

17.232 mg

Rate: 10.0 °C/min

File: 00052.001 DSC METTLER 08-May-96

Ident: 0.0 222-S Laboratory



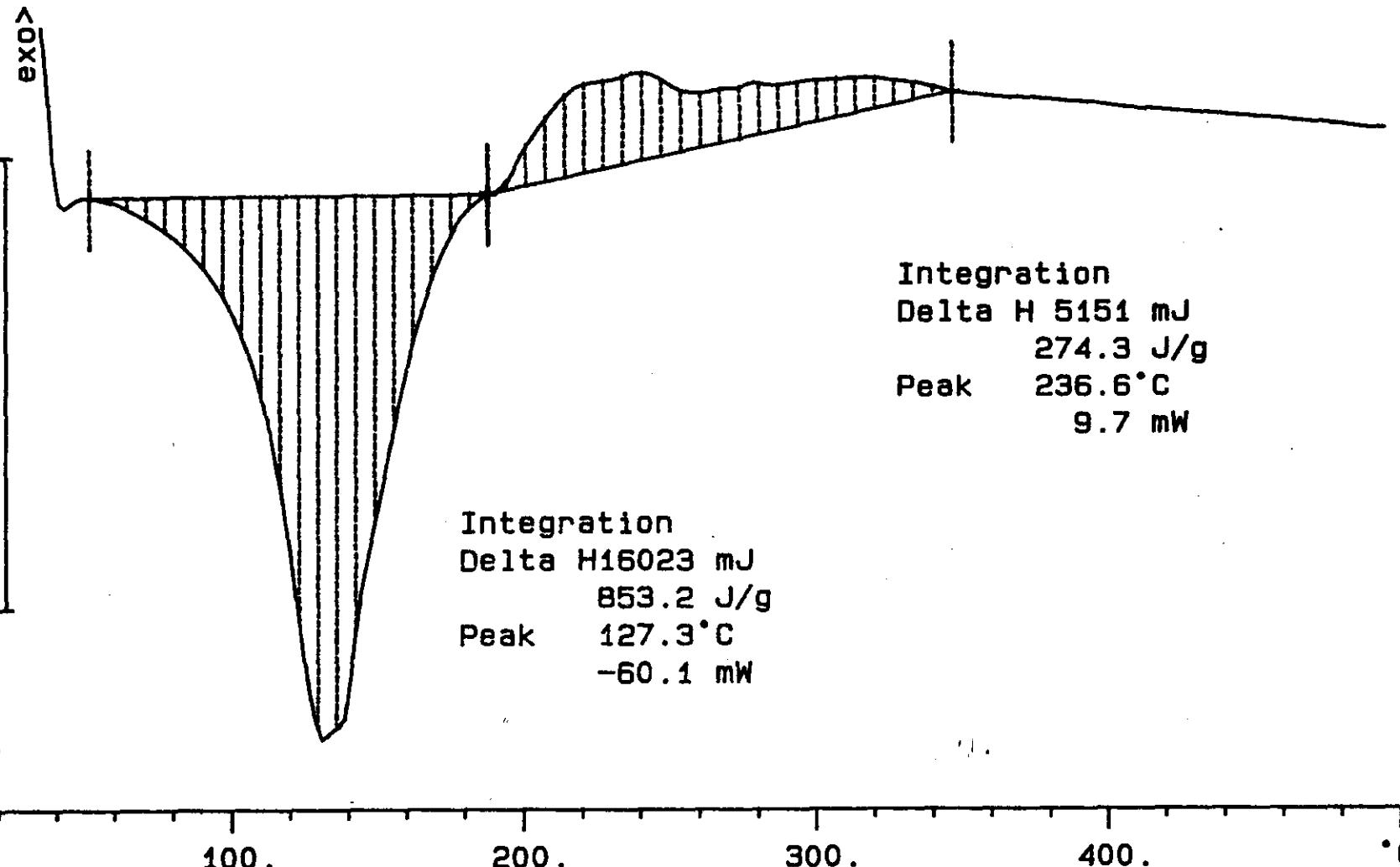
S96T002140 DUP N2

18.781 mg

Rate: 10.0 °C/min

File: 00054.001 DSC METTLER 08-May-96

Ident: 0.0 222-S Laboratory



2-154

WHC-SD-WM-DP-184, REV. 1

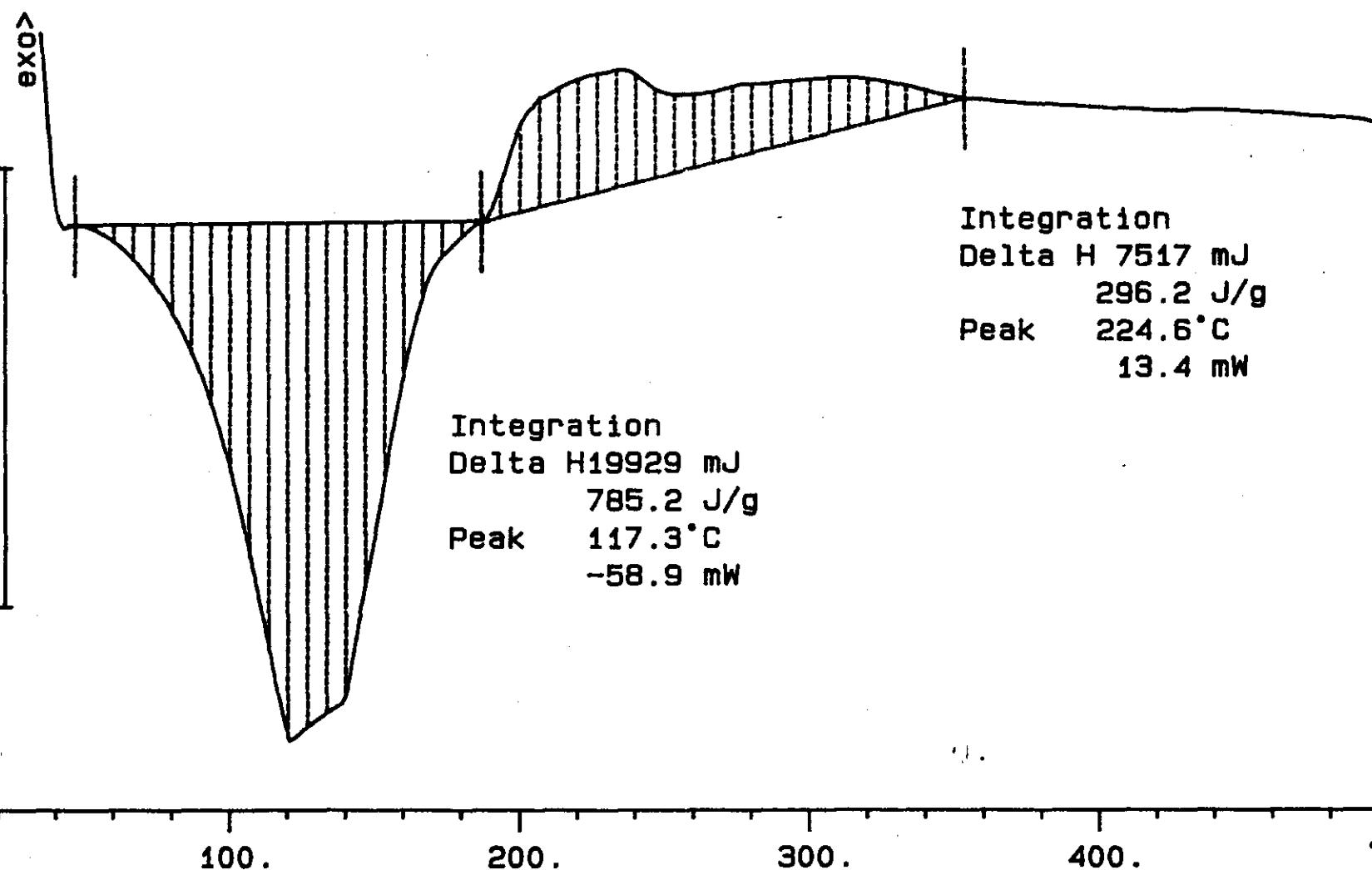
S96T002141 N2

25.381 mg

Rate: 10.0 °C/min

File: 00056.001 DSC METTLER 08-May-96

Ident: 0.0 222-S Laboratory



SCT-2-155

WHC-SD-WM-DP-184, REV. 1

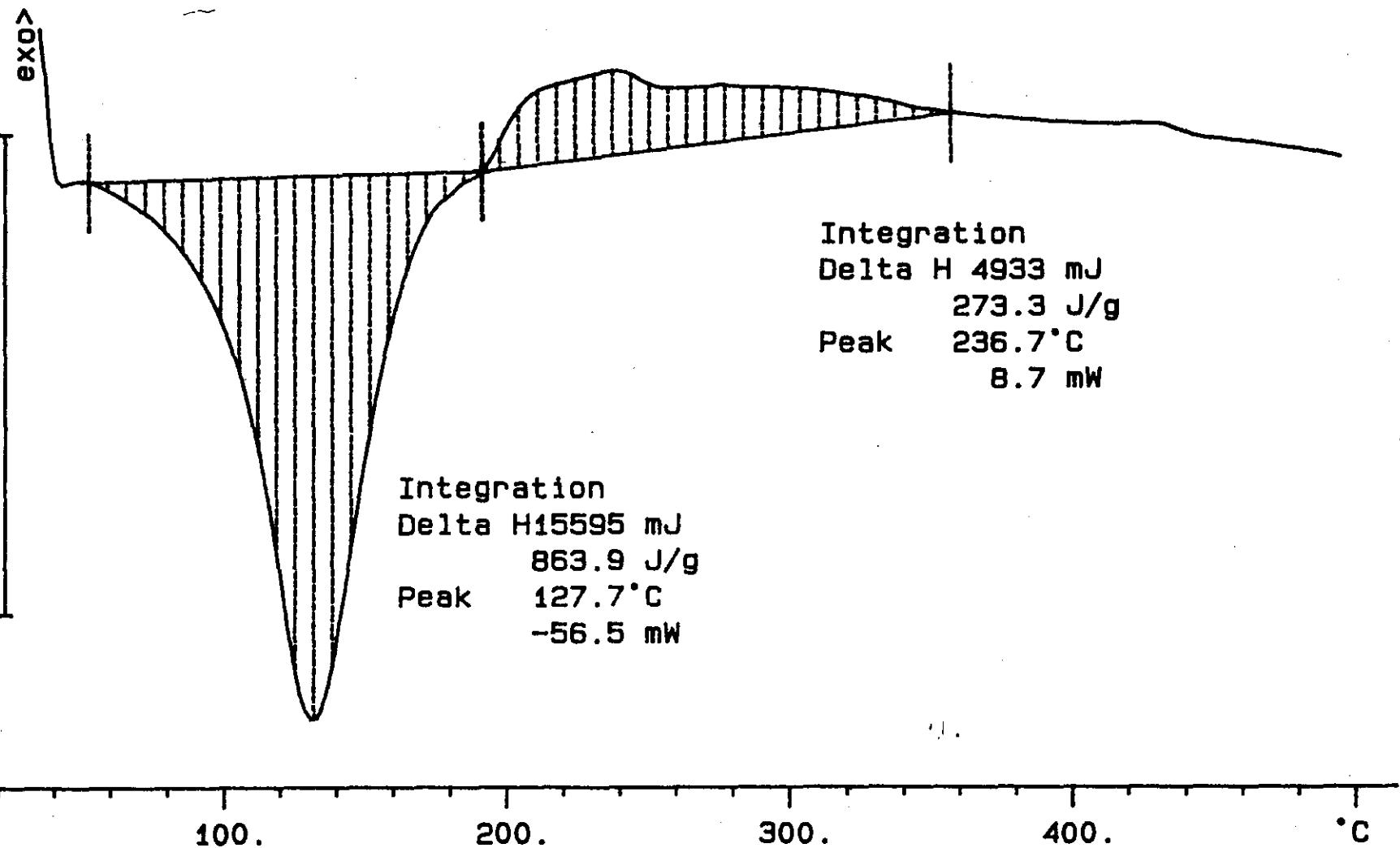
S96T002141 DUP N2

18.053 mg

Rate: 10.0 °C/min

File: 00058.001 DSC METTLER 09-May-96

Ident: 0.0 222-S Laboratory



LABCORE Data Entry Template for Worklist#

8438

Analyst: ADP Instrument: DSC0 3 Book # 12N14BMethod: LA-514-114 Rev/Mod C-1

Worklist Comment: U-107 DSC RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		DSC-03	LIQUID	<u>28.45</u>	<u>28.91</u>	*	N/A Joules/g
96000422	U-107	2 SAMPLE	S96T002142 0	DSC-03	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
96000422	U-107	3 DUP	S96T002142 0	DSC-03	LIQUID	<u>Ø</u>	<u>Ø</u>	N/A	Joules/g

Final page for worklist # 8438See Attached for SignaturesAnalyst SignatureDate5/14/96
Analyst Signature 5-14-96
DateValidated by HAnastis 5-15-96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

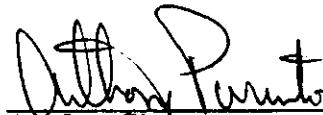
LABCORE Data Entry Template for Worklist#

8438

Analyst: ADP Instrument: DSC0 3 Book # 12N14BMethod: LA-514-113 Rev/Mod C-1

Worklist Comment: U-107 DSC RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID		N/A	Joules/g
96000422	U-107	2 SAMPLE	S96T002142	0	DSC-01	LIQUID	N/A		Joules/g
96000422	U-107	3 DUP	S96T002142	0	DSC-01	LIQUID		N/A	Joules/g

Final page for worklist # **8438** Anthony Puryear 5-12-96
Analyst Signature Date

Analyst Signature Date

Other instrument was used.

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

2-158

Curve 1: DSC

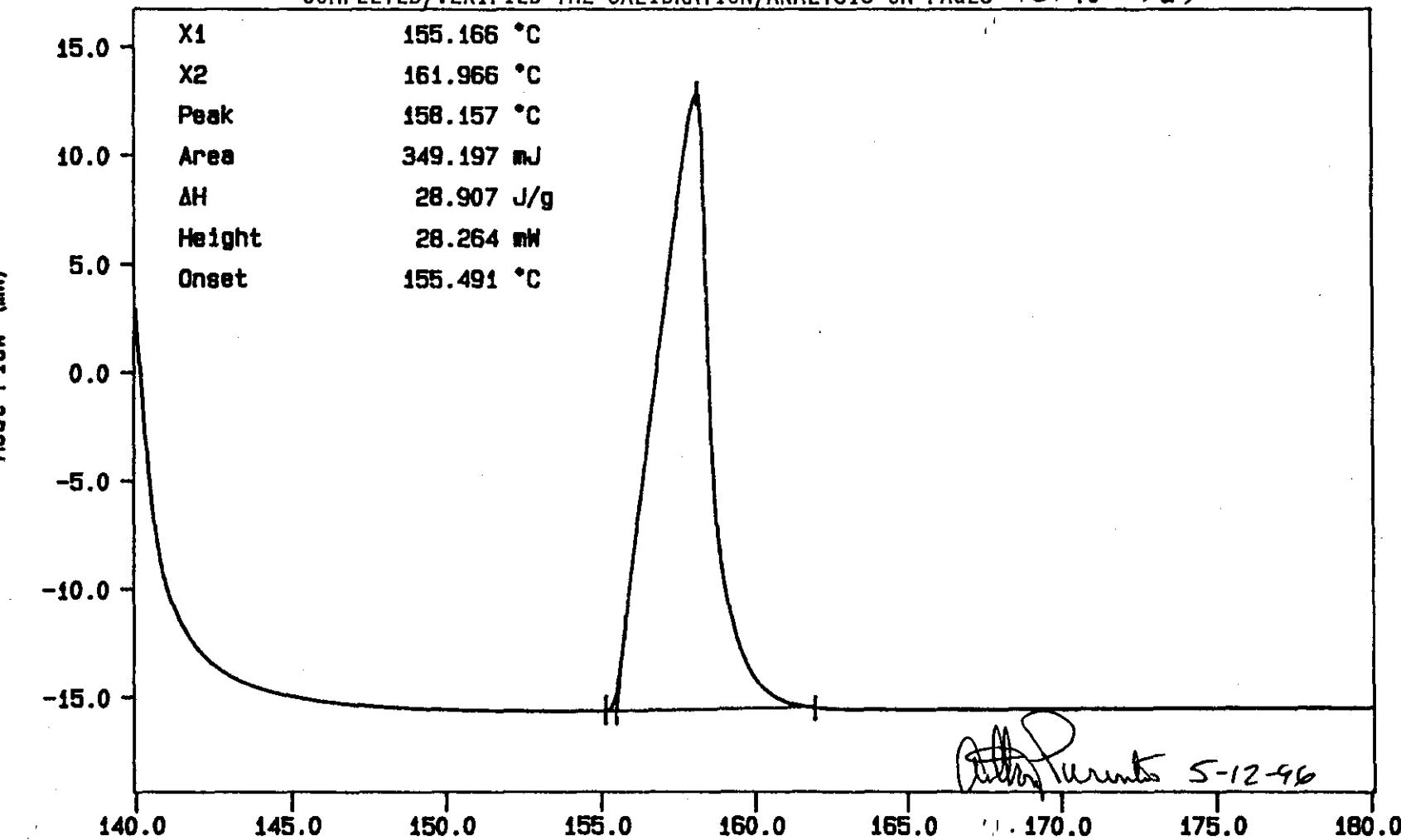
File info: IN0051201 Sun May 12 05:48:54 1996

Sample Weight: 12.080 mg

12N14-B INDIUM AT 10C\MIN

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2159 TO 2161

2-159



N2, EXOTHERM DOWN
TEMP1: 140.0 °C TIME1: 0.0 min RATE1: 10.0 °C/min

Temperature (°C)

AD PURINTON
PERKIN-ELMER

7 Series Thermal Analysis System
Sun May 12 06:54:25 1996

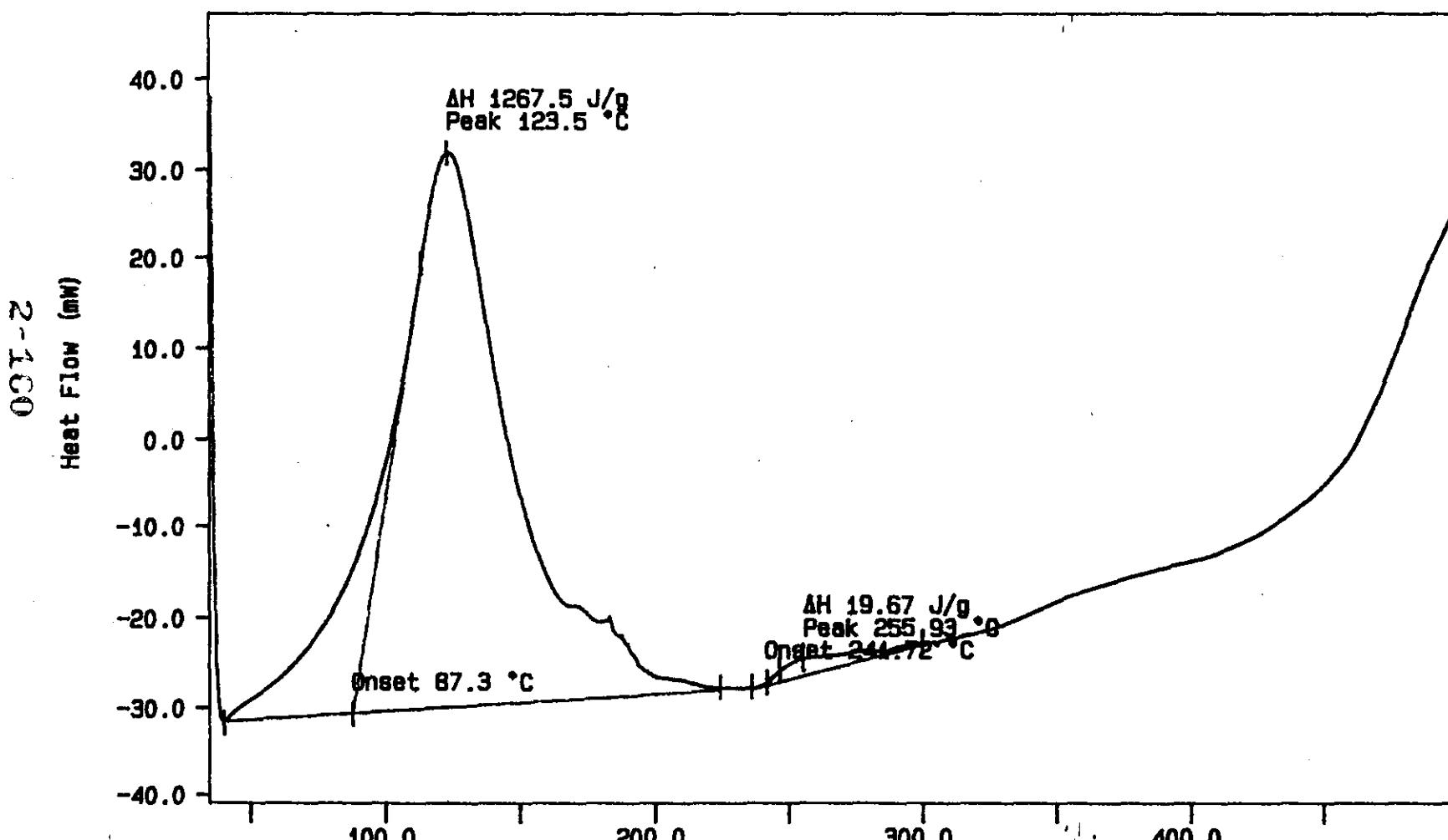
WHC-SD-WM-DP-184, REV. 1

Curve 1: DSC

File info: SAM051208 Sun May 12 14:08:35 1996

Sample Weight: 15.800 mg

S96T002142 SAM



exotherm down, N2 purge gas
TEMP1: 25.0 °C TIME1: 0.0 min RATE1: 10.0 °C/min

Temperature (°C)

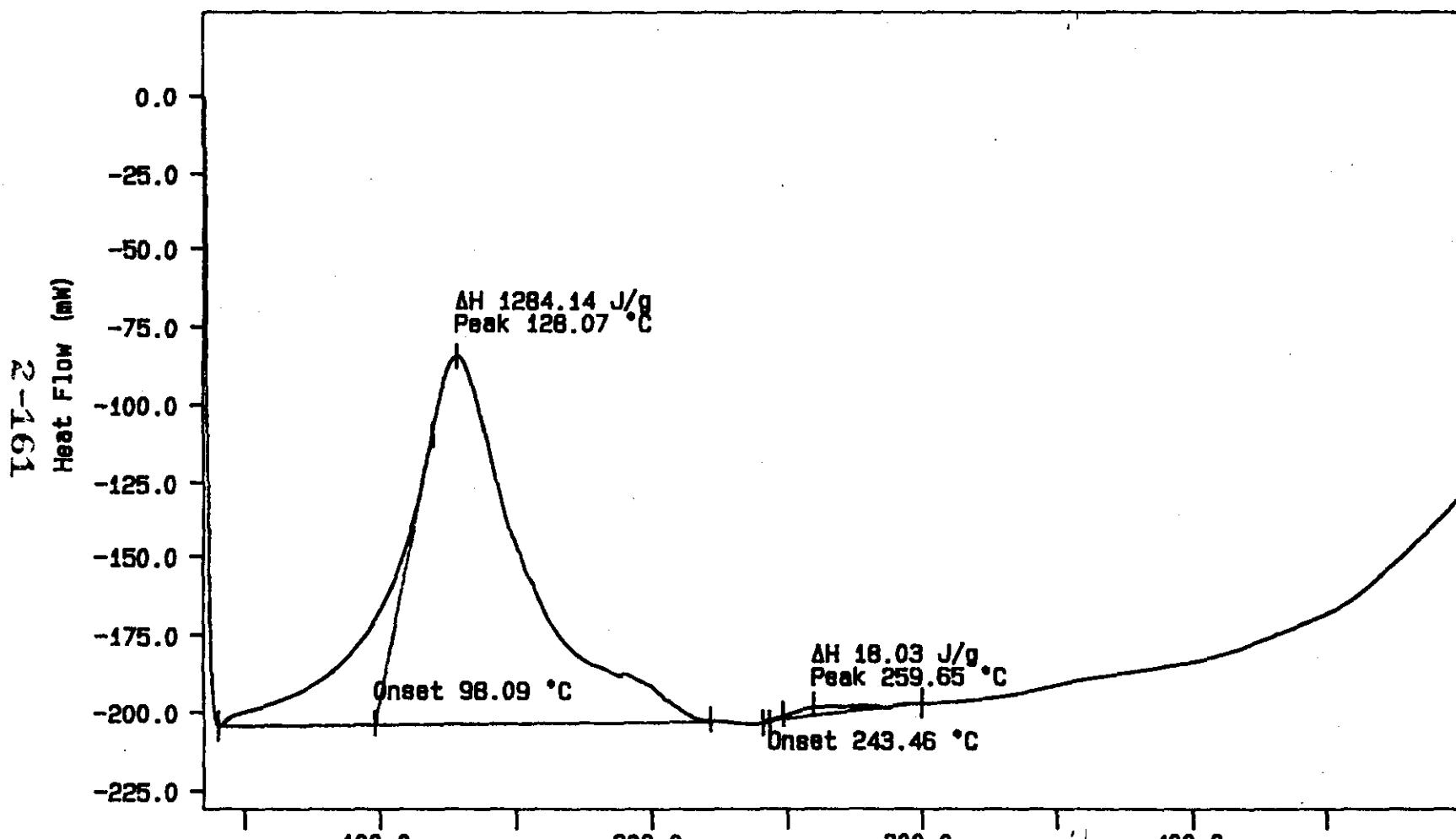
AD PURINTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sun May 12 14:09:39 1996

Curve 1: DSC

File info: SAM051209 Sun May 12 15:04:10 1996

Sample Weight: 29.510 mg

S96T002142 DUP



exotherm down, N₂ purge gas
TEMP1: 25.0 °C TIME1: 0.0 min RATE1: 10.0 °C/min
TEMP2: 500.0 °C

Temperature (°C)

AD PURINTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sun May 12 15:23:42 1996

LABCORE Data Entry Template for Worklist#

8439

Analyst: ANP Instrument: DSC01 Book # 12N14BMethod: LA-514-113 Rev/Mod C-1

Worklist Comment: U-107 DSC RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.45</u>	<u>29.2*</u>	N/A	Joules/g
96000422	U-107	2 SAMPLE	S96T002133	0	DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
96000422	U-107	3 DUP	S96T002133	0	DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	N/A	Joules/g

Final page for worklist # 8439

Anthony Perante 5-15-96
Analyst Signature DateJK Wright 5/21/96
Analyst Signature DateValidated by Marie 5-22-96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2-163 TO 2-165

DSC STD 12N14B

10.500 mg

Rate: 10.0 °C/min

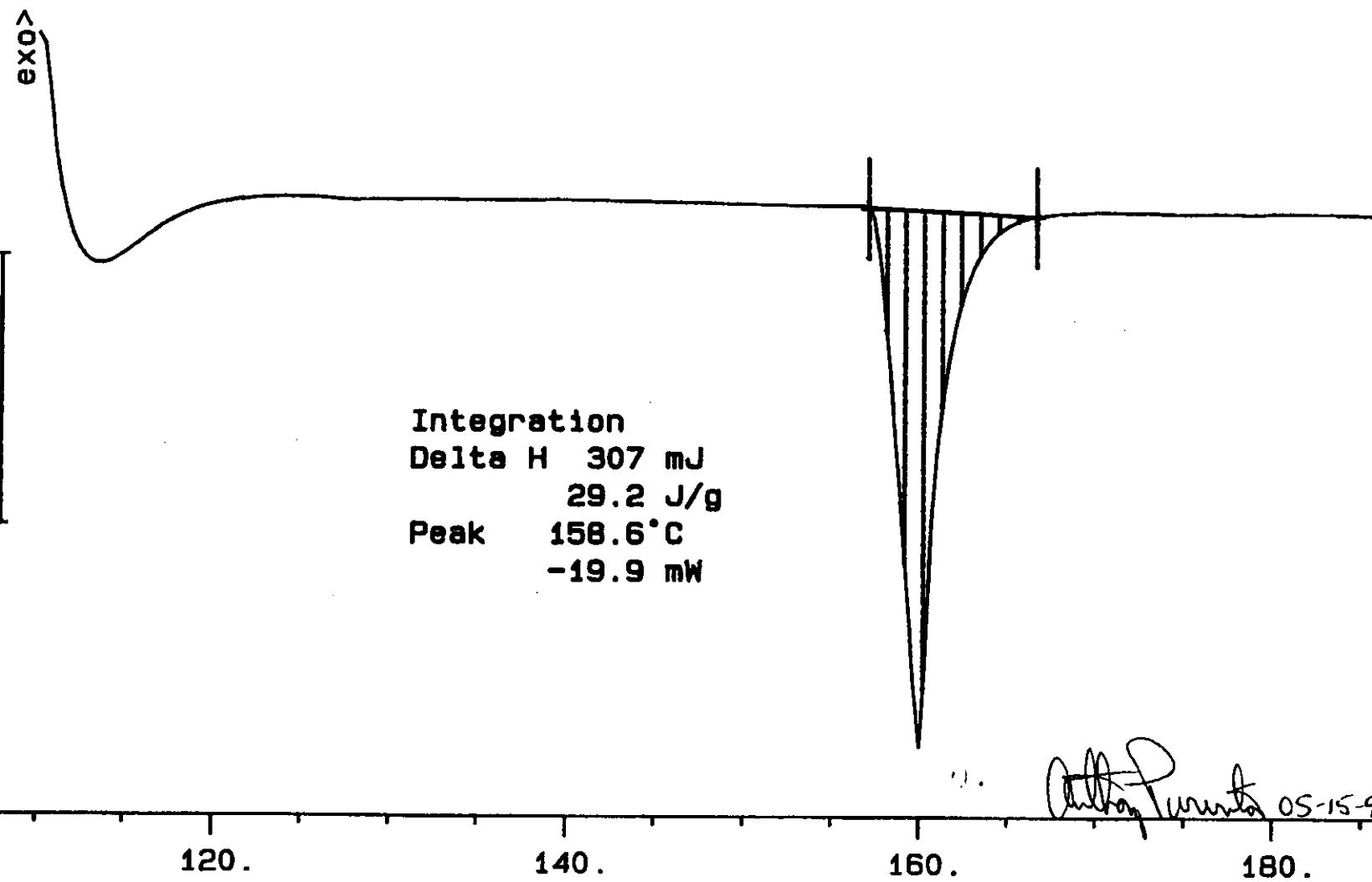
File: 00043.001

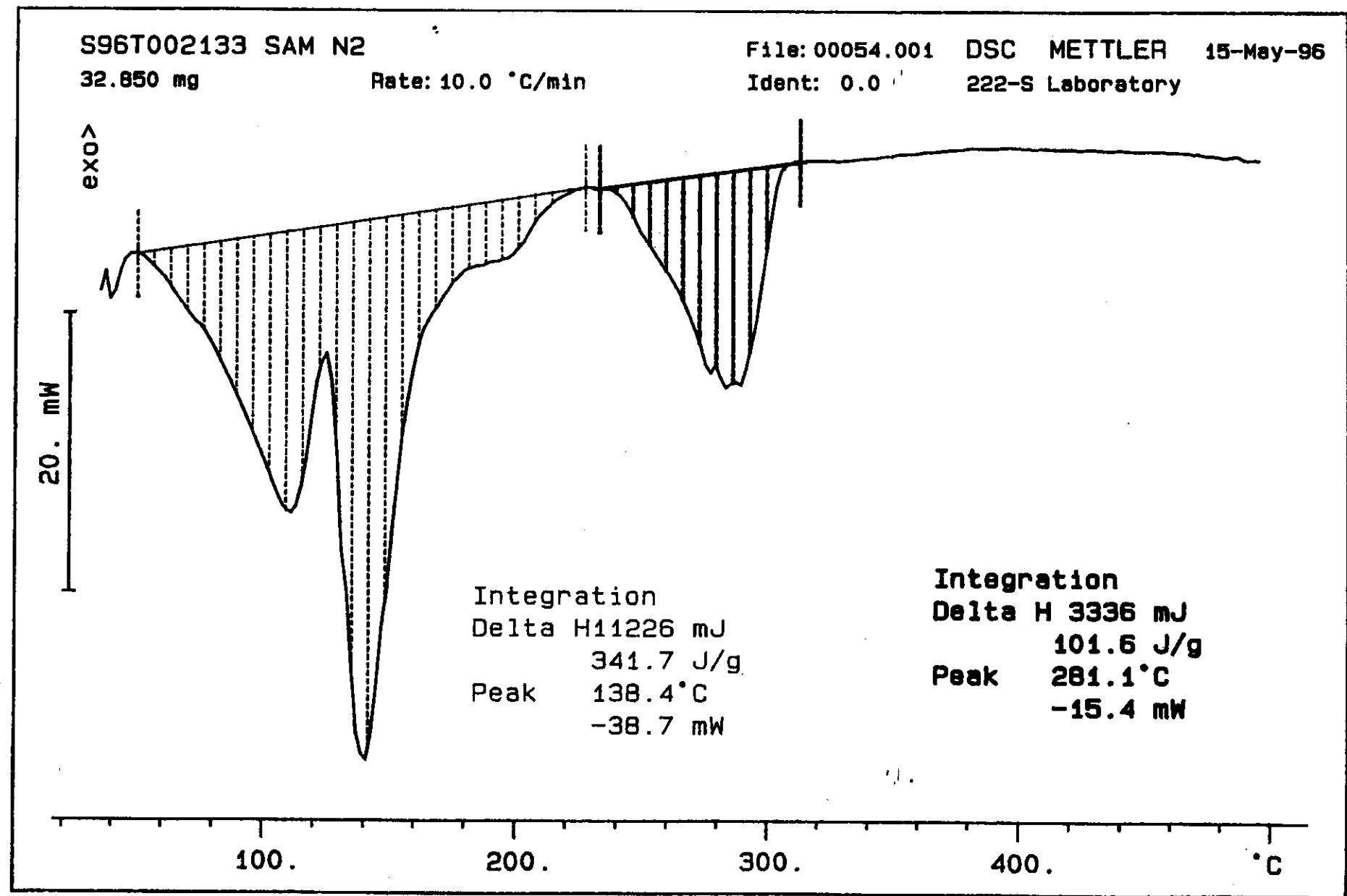
Ident: 0.0

DSC METTLER

15-May-96

222-S Laboratory





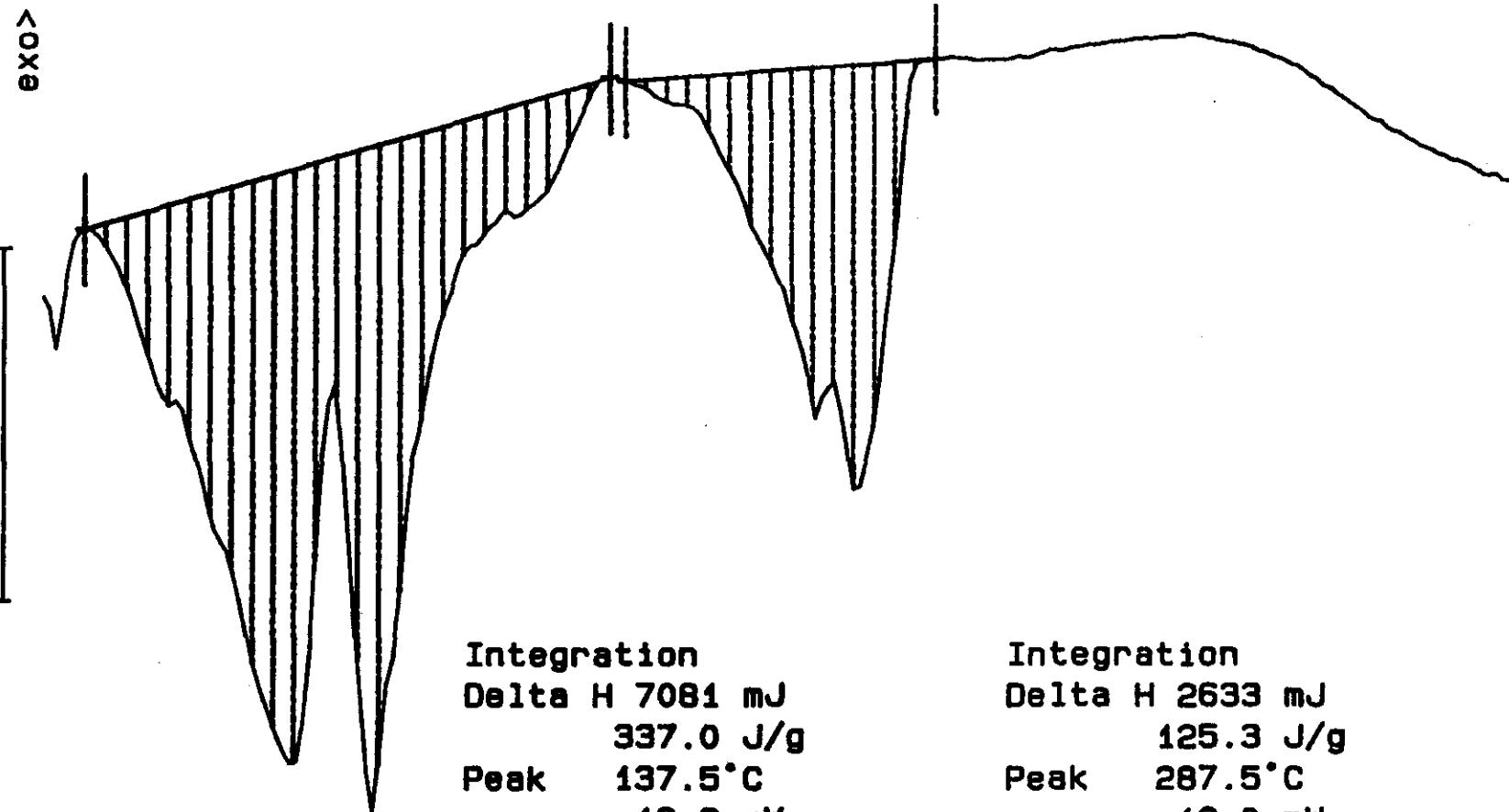
S96T002133 DUP N2

21.010 mg

Rate: 10.0 °C/min

File: 00056.001 DSC METTLER 15-May-96

Ident: 0.0 222-S Laboratory



100.

200.

300.

400.

°C

2-165

LABCORE Data Entry Template for Worklist#

8949

Analyst: RHMcClown Instrument: DSC0 | Book # 12N14BMethod: LA-514-113 Rev/Mod C - 1

Worklist Comment: U-107 FOR DSC-01 RUN UNDER N2 RTS!

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-01	LIQUID	<u>28.45</u>	<u>32.3</u>	<u>N/A</u>	Joules/g
96000422	U-107	2	SAMPLE	S96T001866	0		DSC-01	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
96000422	U-107	3	DUP	S96T001866	0		DSC-01	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 8949

RHMcClown 5/23/96
Analyst Signature DateRHStoh 5-28-96
Analyst Signature Date

Verified/Validated by
Blandina Valenzuela 5-31-96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

DSC STD 12N14B

8.148 mg

Rate: 10.0 °C/min

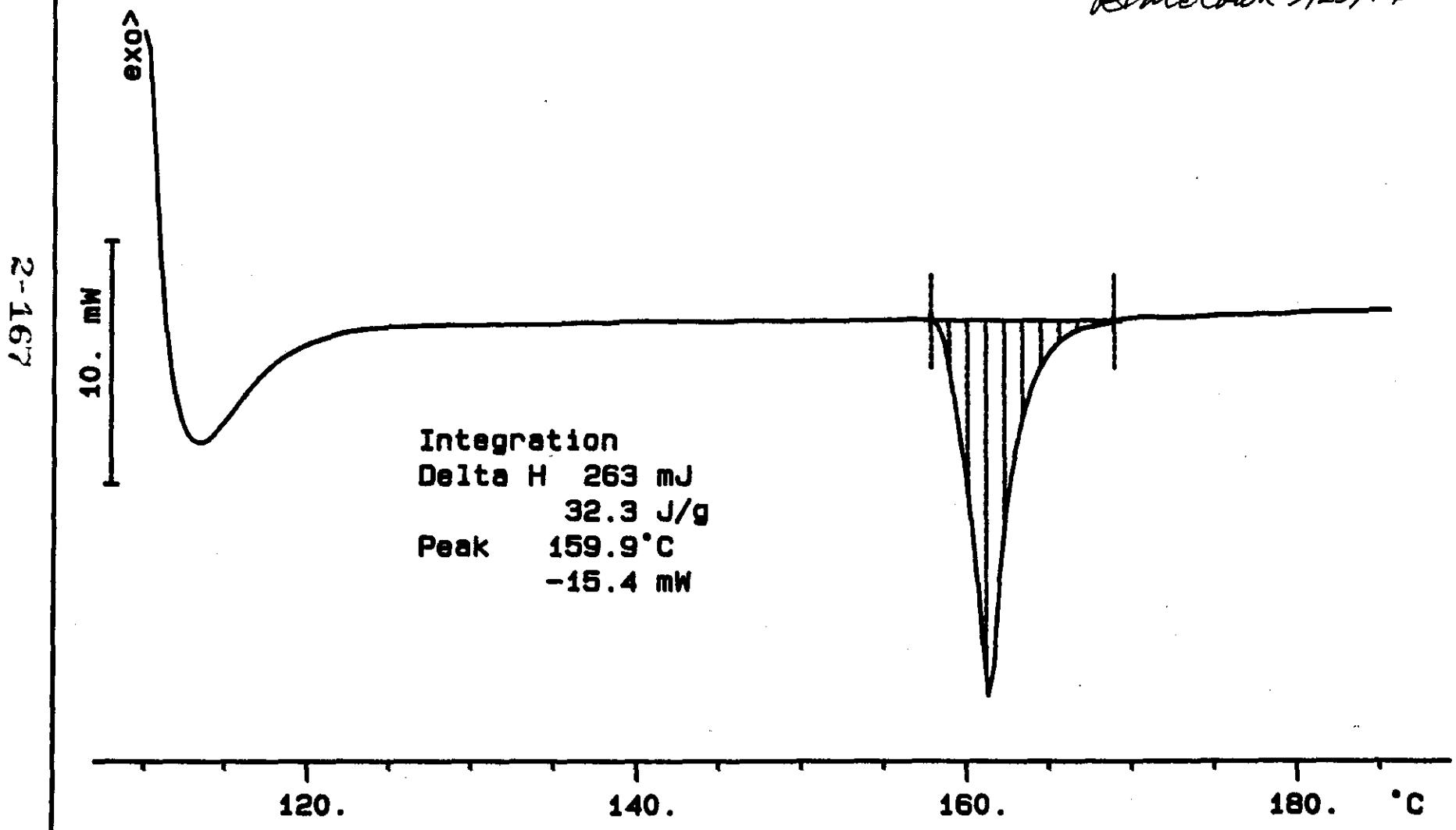
File: 00015.001

Ident: 0.0

DSC METTLER 23-May-96

222-S Laboratory

R. McCown 5/23/96



S96T001866 N2

15.117 mg

Rate: 10.0 °C/min

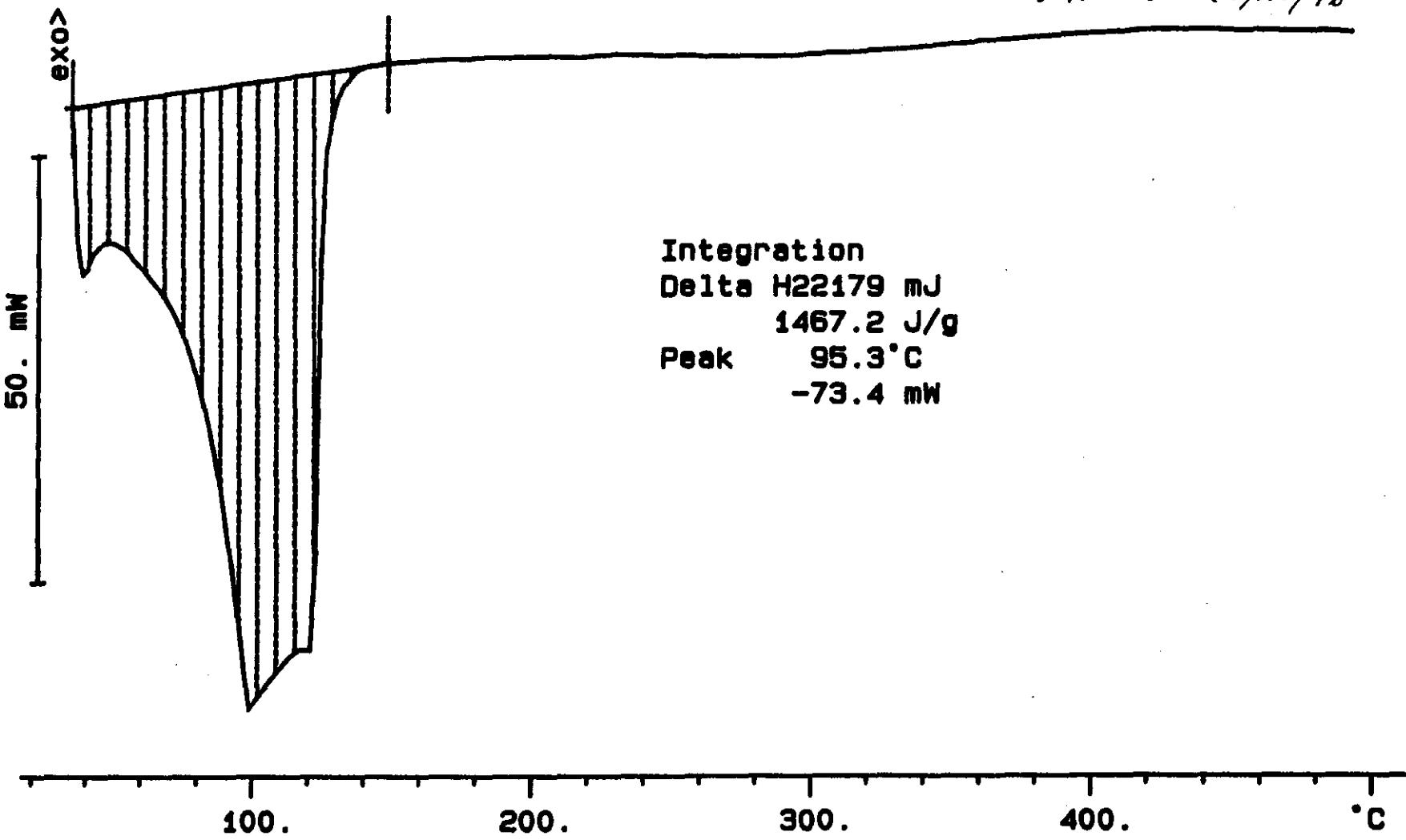
File: 00017.001 DSC METTLER 23-May-96

Ident: 0.0

222-S Laboratory

RHMcClure 5/23/96

2-163



S96T001866 DUP N2

20.707 mg

Rate: 10.0 °C/min

File: 00020.001

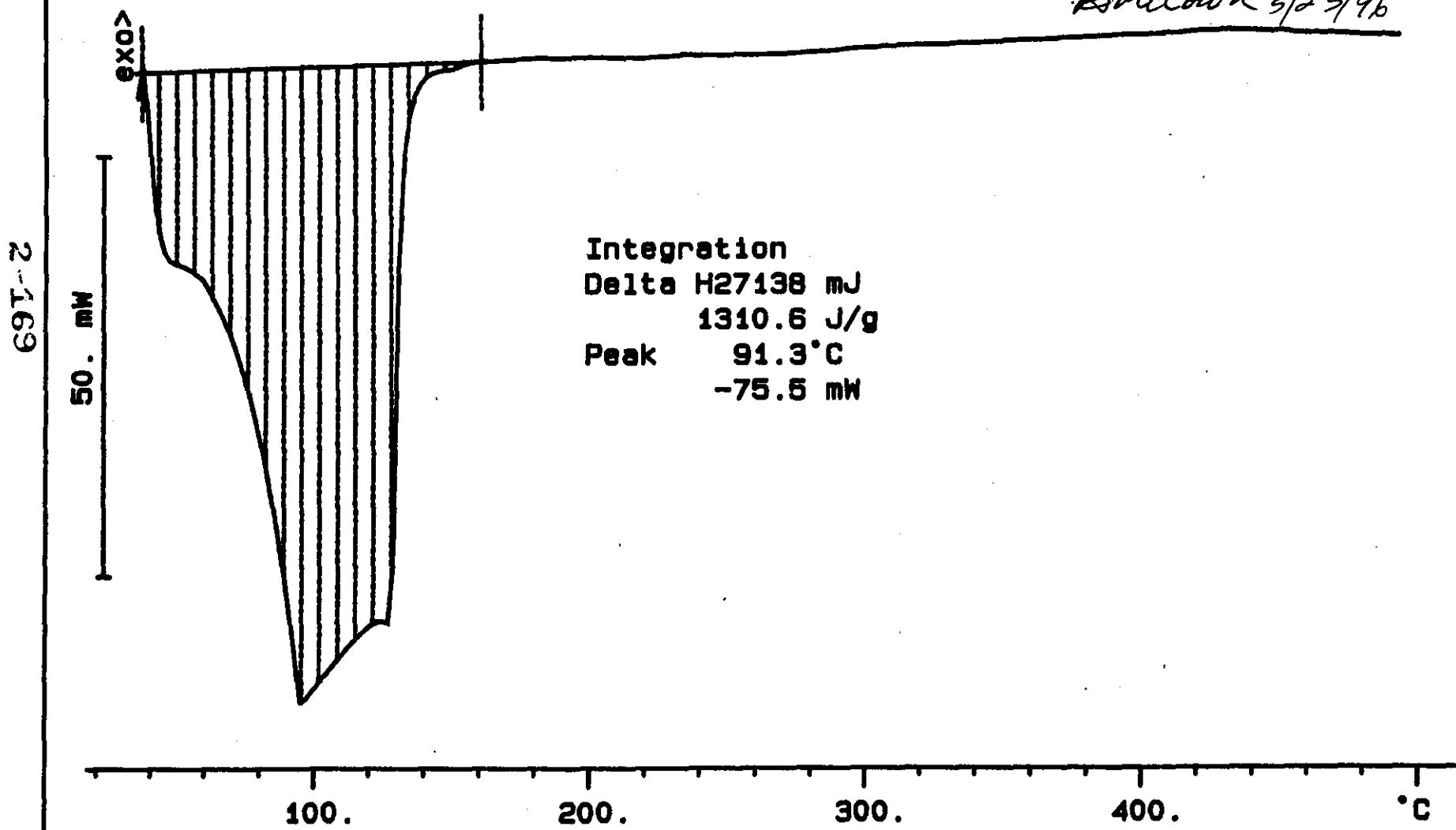
Ident: 0.0

DSC METTLER

23-May-96

222-8 Laboratory

RJMcClown 5/23/96



LABCORE Data Entry Template for Worklist#

9021

Analyst: BOY Instrument: DSC01 Book # _____

Method: LA-514-113 Rev/Mod _____

Worklist Comment: Dry DSC for U-107. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
96000085	U-107	1 SAMPLE	S96T000665	0	DSC-02	LIQUID	N/A	117.2		Joules/g Dry
96000085	U-107	2 DUP	S96T000665	0	DSC-02	LIQUID	117.2	114.8	N/A	Joules/g Dry
96000085	U-107	3 SAMPLE	S96T000682	0	DSC-02	LIQUID	N/A	129.7		Joules/g Dry
96000085	U-107	4 DUP	S96T000682	0	DSC-02	LIQUID	129.7	126.6	N/A	Joules/g Dry
96000422	U-107	5 SAMPLE	S96T002140	0	DSC-02	LIQUID	N/A	539.9		Joules/g Dry
96000422	U-107	6 DUP	S96T002140	0	DSC-02	LIQUID	539.9	577.6	N/A	Joules/g Dry
96000126	U-107	7 SAMPLE	S96T001119	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000126	U-107	8 DUP	S96T001119	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000126	U-107	9 SAMPLE	S96T001120	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000126	U-107	10 DUP	S96T001120	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000126	U-107	11 SAMPLE	S96T001121	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000126	U-107	12 DUP	S96T001121	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000126	U-107	13 SAMPLE	S96T002034	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000126	U-107	14 DUP	S96T002034	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000422	U-107	15 SAMPLE	S96T002141	0	DSC-02	LIQUID	N/A	559.2		Joules/g Dry
96000422	U-107	16 DUP	S96T002141	0	DSC-02	LIQUID	559.2	516.0	N/A	Joules/g Dry
96000422	U-107	17 SAMPLE	S96T002142	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000422	U-107	18 DUP	S96T002142	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist#

9021

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
-------	---------	---	------	---------	---	---	------	--------	--------	-------	----	------

Final page for worklist # 9021

Blandina Valenzuela 5-28-96
Analyst Signature Date

Analyst Signature Date

Data Entry Comments:

*Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.*

2-171

U-107

CALCULATED DRY DSC			
SAMPLE NO.	DSC RESULT (J/g)	TGA RESULT (% water)	DRY DSC RESULT
S96T000665	54.8	53.23	117.2
665D	53.7	53.23	114.8
682	65.3	49.67	^{522.9} 500 39.6 129.7
682D	63.7	49.67	126.6
1866	^{5-21-95 DRY} X DOSE	^{5-21-95 DRY} X DOSE	
1866D			
2140	256.4	52.51	539.9
2140D	274.3	52.51	577.6
1119	Ø	—	Ø
1119D	Ø	—	Ø
1120	Ø	—	Ø
1120D	Ø	—	Ø
1121	Ø	—	Ø
1121D	Ø	—	Ø
2034	Ø	98.16	Ø
2034D	Ø	98.16	Ø
2141	296.2	47.03	559.2
2141D	273.3	47.03	516.0
2142	Ø	—	Ø
2142D	Ø	—	Ø

LABCORE Data Entry Template for Worklist#

9022

Analyst: BOY

Instrument: DSC01

Book # Method: LA-514-113 Rev/Mod

Worklist Comment: Dry DSC for U-107. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
96000085	U-107	1	SAMPLE	S96T000650	0		DSC-02	SOLID	N/A	<u>33.78</u>		Joules/g Dry
96000085	U-107	2	DUP	S96T000650	0		DSC-02	SOLID	<u>33.78</u>	<u>14.18</u>	N/A	Joules/g Dry
96000085	U-107	3	SAMPLE	S96T000653	0		DSC-02	SOLID	N/A	<u>16.77</u>		Joules/g Dry
96000085	U-107	4	DUP	S96T000653	0		DSC-02	SOLID	<u>16.77</u>	<u>36.19</u>	N/A	Joules/g Dry
96000085	U-107	5	SAMPLE	S96T000644	0		DSC-02	SOLID	N/A	<u>271.3</u>		Joules/g Dry
96000085	U-107	6	DUP	S96T000644	0		DSC-02	SOLID	<u>271.3</u>	<u>253.8</u>	N/A	Joules/g Dry
96000085	U-107	7	SAMPLE	S96T000647	0		DSC-02	SOLID	N/A	<u>11.95</u>		Joules/g Dry
96000085	U-107	8	DUP	S96T000647	0		DSC-02	SOLID	<u>11.95</u>	<u>10.21</u>	N/A	Joules/g Dry
96000085	U-107	9	SAMPLE	S96T000683	0		DSC-02	SOLID	N/A	<u>15.30</u>		Joules/g Dry
96000085	U-107	10	DUP	S96T000683	0		DSC-02	SOLID	<u>15.30</u>	<u>14.07</u>	N/A	Joules/g Dry
96000126	U-107	11	SAMPLE	S96T001055	0		DSC-02	SOLID	N/A	<u>Ø</u>		Joules/g Dry
96000126	U-107	12	DUP	S96T001055	0		DSC-02	SOLID	<u>Ø</u>	<u>Ø</u>	N/A	Joules/g Dry
96000126	U-107	13	SAMPLE	S96T001128	0		DSC-02	SOLID	N/A	<u>Ø</u>		Joules/g Dry
96000126	U-107	14	DUP	S96T001128	0		DSC-02	SOLID	<u>Ø</u>	<u>Ø</u>	N/A	Joules/g Dry
96000085	U-107	15	SAMPLE	S96T001143	0		DSC-02	SOLID	N/A	<u>Ø</u>		Joules/g Dry
96000085	U-107	16	DUP	S96T001143	0		DSC-02	SOLID	<u>Ø</u>	<u>Ø</u>	N/A	Joules/g Dry
96000085	U-107	17	TRPL	S96T001143	0		DSC-02	SOLID	<u>Ø</u>	<u>Ø</u>	N/A	Joules/g Dry
96000085	U-107	18	SAMPLE	S96T001159	0		DSC-02	SOLID	N/A	<u>11.80</u>		Joules/g Dry

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist#

9022

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
96000085	U-107	19 DUP	S96T001159	0	DSC-02	SOLID	11.80	18.20	N/A	Joules/g Dry

Final page for worklist # **9022**

Blandina Valenzuela 5-28-96

Analyst Signature

Date

Analyst Signature

Date

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

2-174

U-107

CALCULATED DRY DSC			
SAMPLE NO.	DSC RESULT (J/g)	TGA RESULT (% water)	DRY DSC RESULT
916T00065D	25.5	24.52	33.78
650D	10.7	24.52	14.18
653	13.9	17.11	16.77
653D	30.0	17.11	36.19
644	141.2	47.96	271.3
644D	132.1	47.96	253.8
647	9.6	19.68	11.95
647D	8.2	19.68	10.21
683	12.4	18.95	15.30
683D	11.4	18.95	14.07
794		5-29-96 BOM	
794D			
1055	Ø	—	Ø
1055D	Ø	—	Ø
1128	Ø	—	Ø
1128D	Ø	—	Ø
1143	Ø	6.40 *	Ø
1143D	Ø	6.40 *	Ø
1159	9.4	20.33	11.80
1159D	14.5	20.33	18.20
1143T	Ø	—	Ø

* Avg of 3 results

LABCORE Data Entry Template for Worklist#

9023

Analyst: BDV

Instrument: DSC01

Book # Method: LA-514-113 Rev/Mod

Worklist Comment: Dry DSC for U-107. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
96000422	U-107	1 SAMPLE	S96T002131	0	DSC-02	SOLID	N/A	Ø		Joules/g Dry
96000422	U-107	2 DUP	S96T002131	0	DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
96000126	U-107	3 SAMPLE	S96T001056	0	DSC-02	SOLID	N/A	Ø		Joules/g Dry
96000126	U-107	4 DUP	S96T001056	0	DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
96000126	U-107	5 SAMPLE	S96T001057	0	DSC-02	SOLID	N/A	232.9		Joules/g Dry
96000126	U-107	6 DUP	S96T001057	0	DSC-02	SOLID	232.9	234.5	N/A	Joules/g Dry
96000126	U-107	7 SAMPLE	S96T001058	0	DSC-02	SOLID	N/A	18.11		Joules/g Dry
96000126	U-107	8 DUP	S96T001058	0	DSC-02	SOLID	18.11	125.5	N/A	Joules/g Dry
96000126	U-107	9 TRIP	S96T001058	0	DSC-02	SOLID	18.11	39.22	N/A	Joules/g Dry
96000126	U-107	10 SAMPLE	S96T001059	0	DSC-02	SOLID	N/A	Ø		Joules/g Dry
96000126	U-107	11 DUP	S96T001059	0	DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
96000126	U-107	12 SAMPLE	S96T001064	0	DSC-02	SOLID	N/A	Ø		Joules/g Dry
96000126	U-107	13 DUP	S96T001064	0	DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
96000126	U-107	14 SAMPLE	S96T001065	0	DSC-02	SOLID	N/A	Ø		Joules/g Dry
96000126	U-107	15 DUP	S96T001065	0	DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
96000126	U-107	16 SAMPLE	S96T001068	0	DSC-02	SOLID	N/A	Ø		Joules/g Dry
96000126	U-107	17 DUP	S96T001068	0	DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
96000126	U-107	18 SAMPLE	S96T001070	0	DSC-02	SOLID	N/A	Ø		Joules/g Dry

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist#

9023

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
96000126	U-107	19 DUP	S96T001070 0	DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry

Final page for worklist # 9023

Blandina Valenzuela 5-28-96

Analyst Signature

Date

Analyst Signature

Date

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

CALCULATED DRY DSC			
SAMPLE NO.	DSC RESULT (J/g)	TGA RESULT (% water)	DRY DSC RESULT
S96T002131	Ø	—	Ø
2131D	Ø	—	Ø
1056	Ø	—	Ø
1056D	Ø	—	Ø
1057	147.0	36.88	232.9
1057D	148.0	36.88	234.5
1058	11.5	36.51 *	18.11
1058D	79.7	36.51 *	125.5
1059	Ø	21.26	Ø
1059D	Ø	21.26	Ø
1064	Ø	—	Ø
1064D	Ø	—	Ø
1065	Ø	—	Ø
1065D	Ø	—	Ø
1068	Ø	40.82	Ø
1068D	Ø	40.82	Ø
1070	Ø	91.23	Ø
1070D	Ø	91.23	Ø
1058T	24.9	36.51 *	39.22

5-29-96 BDV

* ~~1058T, 1058D, 1068, 1068D, 1070, 1070D~~ Avg of 3 numbers

LABCORE Data Entry Template for Worklist#

9024

Analyst: BDV Instrument: DSC01 Book # _____

Method: LA-514-113 Rev/Mod _____

Worklist Comment: Dry DSC for U-107. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
96000422	U-107	1 SAMPLE	S96T001867	0	DSC-02	SOLID	N/A	280.2		Joules/g Dry
96000422	U-107	2 DUP	S96T001867	0	DSC-02	SOLID	280.2	209.6	N/A	Joules/g Dry
96000422	U-107	3 SAMPLE	S96T001873	0	DSC-02	SOLID	N/A	Ø		Joules/g Dry
96000422	U-107	4 DUP	S96T001873	0	DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
96000422	U-107	5 SAMPLE	S96T001874	0	DSC-02	SOLID	N/A	Ø		Joules/g Dry
96000422	U-107	6 DUP	S96T001874	0	DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
96000422	U-107	7 SAMPLE	S96T002132	0	DSC-02	SOLID	N/A	Ø		Joules/g Dry
96000422	U-107	8 DUP	S96T002132	0	DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
96000422	U-107	9 SAMPLE	S96T002133	0	DSC-02	SOLID	N/A	Ø		Joules/g Dry
96000422	U-107	10 DUP	S96T002133	0	DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry

Final page for worklist # 9024

Blandina Valenzuela 5/22/96

Analyst Signature

Date

Analyst Signature

Date

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

CALCULATED DRY DSC			
SAMPLE NO.	DSC RESULT (J/g)	TGA RESULT (% water)	DRY DSC RESULT
S96T001867	140.6	49.82	280.2
1867D	105.2	49.82	209.6
1873	Ø	—	Ø
1873D	Ø	—	Ø
1874	Ø	—	Ø
1874D	Ø	—	Ø
2132	Ø	—	Ø
2132D	Ø	—	Ø
2133	Ø	15.92	Ø
2133D	Ø	15.92	Ø

LABCORE Data Entry Template for Worklist#

9028

Analyst: ADP Instrument: DSC0 3 Book # 12N14BMethod: LA-514-114 Rev/Mod C-1

Worklist Comment: U-107. Run under N2.

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		DSC-03	SOLID	<u>28.45</u>	<u>28.94</u>	*	N/A Joules/g
96000422	U-107	2 SAMPLE	S96T002131	0	DSC-03	SOLID	<u>N/A</u>	<u>Ø</u>	Joules/g
96000422	U-107	3 DUP	S96T002131	0	DSC-03	SOLID	<u>Ø</u>	<u>Ø</u>	N/A Joules/g

Final page for worklist # **9028**

Blandina Valenzuela for AD Purinton RHb 5-22-96

Analyst Signature

Date 5-21-96

Analyst Signature

Date

Validated by Hanestr 5-22-96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Curve 1: DSC

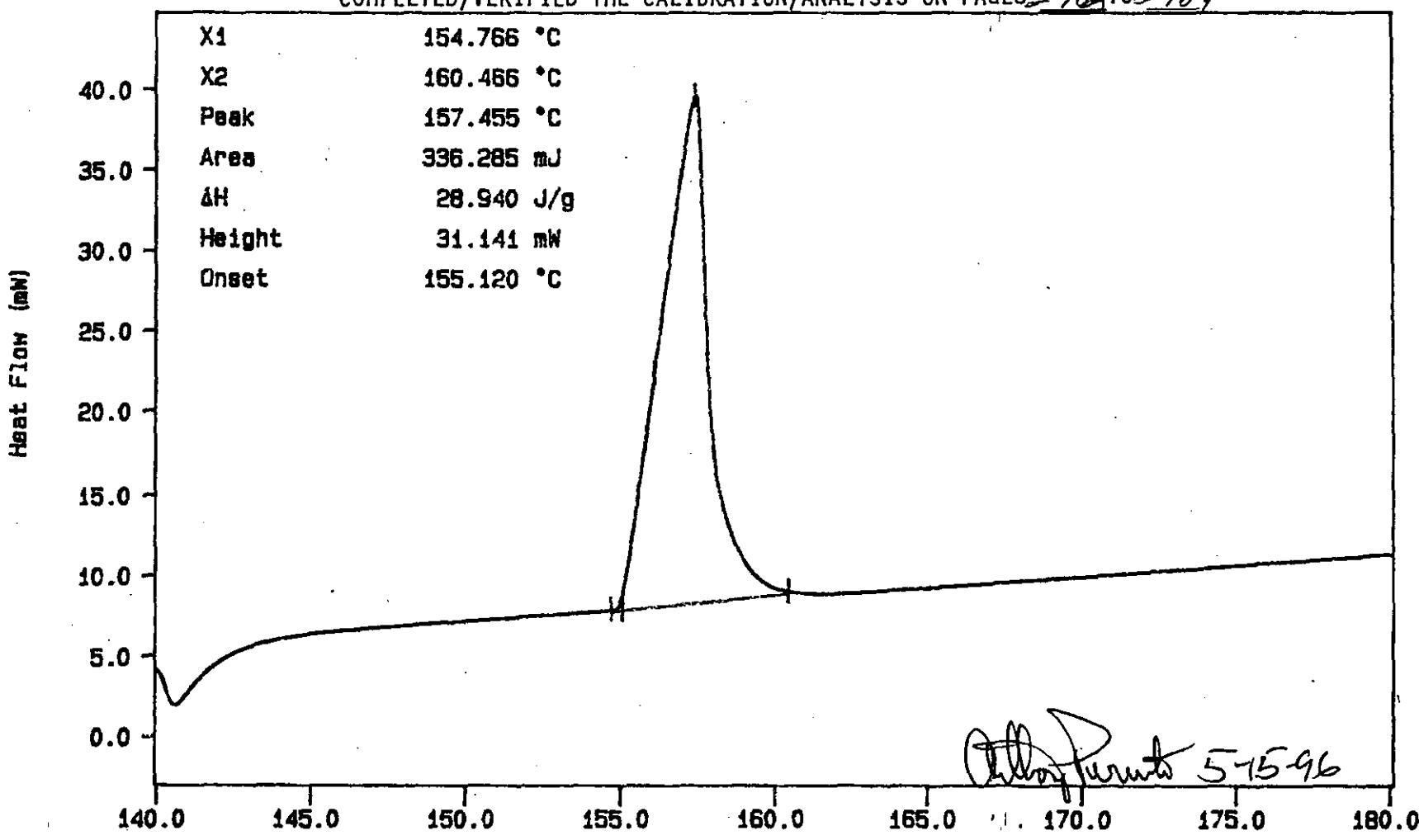
File info: IND051502 Wed May 15 18:29:24 1996

Sample Weight: 11.620 mg

12N14-B INDIUM AT 10C\MIN

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2182 TO 2184

2-182



Ad Purinton 5-15-96

N2, EXOTHERM DOWN

TEMP1: 140.0 S TIMES: 0.0 min RATE1: 10.0 C/min

TEMP2: 180.0 S

Temperature (°C)

AD PURINTON

PERKIN-ELMER

7 Series Thermal Analysis System

Wed May 15 18:32:15 1996

WHC-SD-WM-DP-184, REV. 1

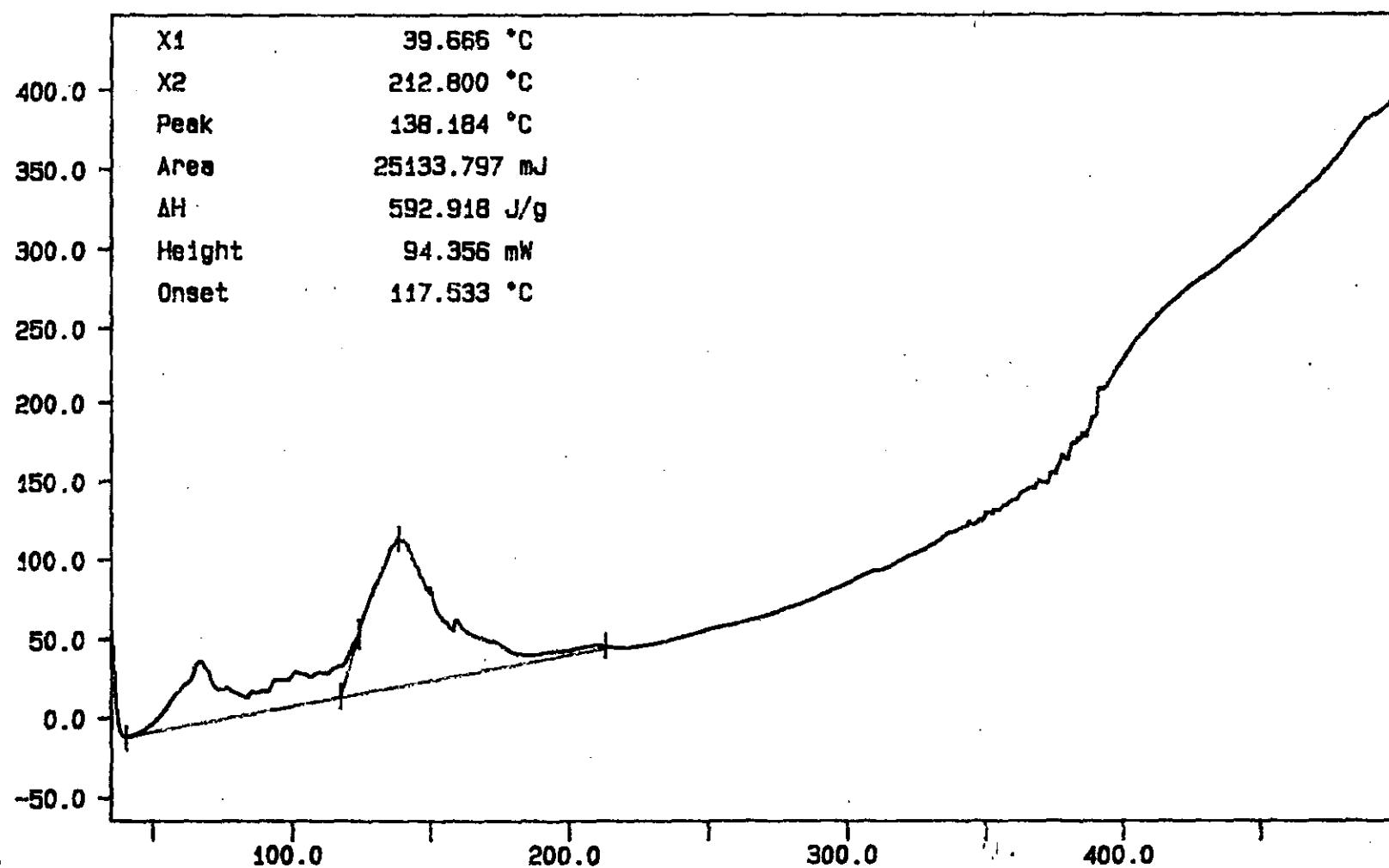
Curve 1: DSC

File info: SAM051505 Wed May 15 21:10:51 1996

Sample Weight: 42.390 mg

S96T002131 SAM

2-183



exotherm down, N₂ purge gas
TEMP1: 25.0 °C TIME1: 0.0 min RATE1: 10.0 °C/min

Temperature (°C)

AD PURINTON
PERKIN-ELMER
7 Series Thermal Analysis System
Wed May 15 21:23:13 1996

WHC-SD-WM-DP-184, REV. 1

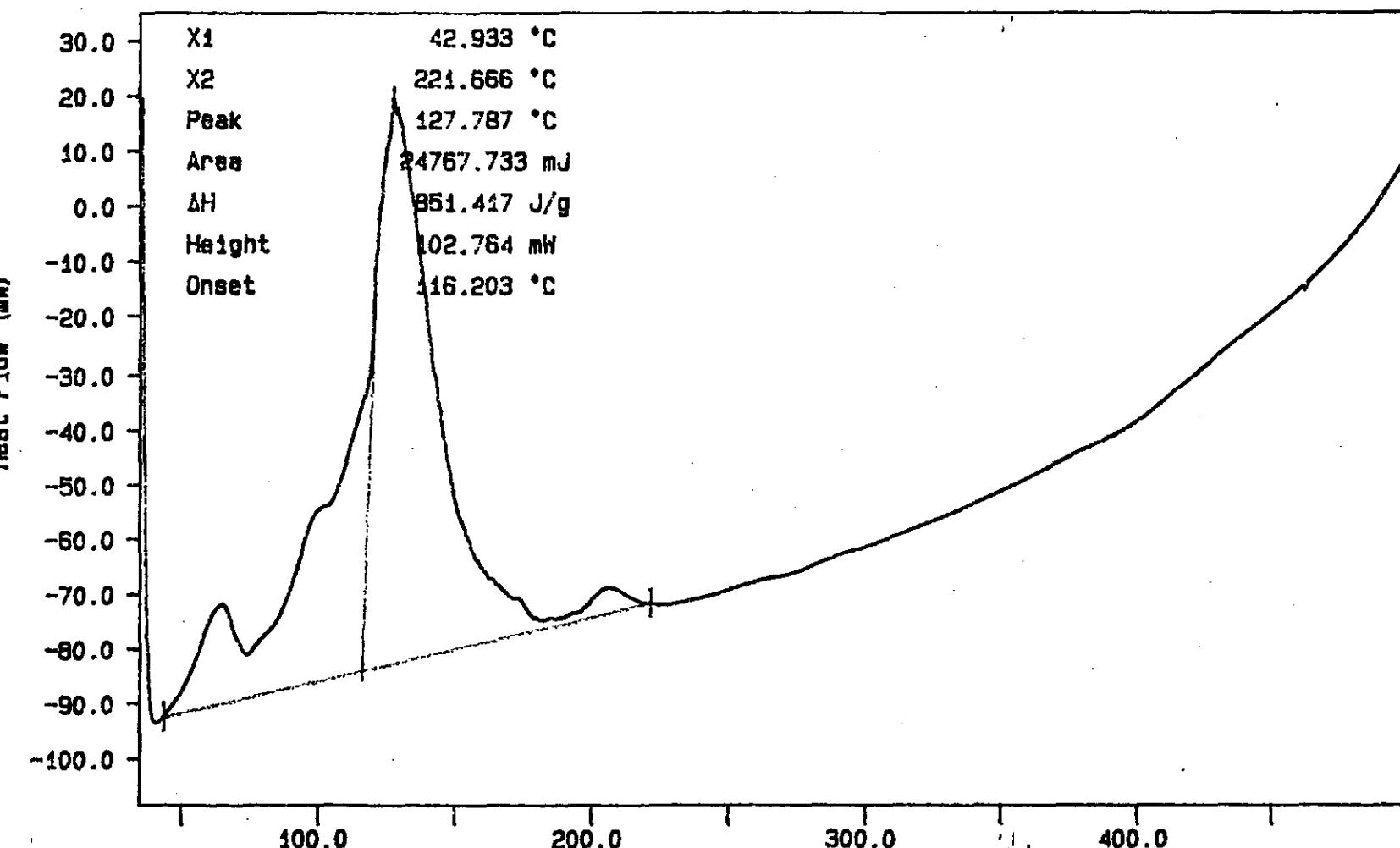
Curve 1: DSC

File info: SAM051506 Wed May 15 22:19:47 1996

Sample Weight: 29.090 mg

S96T002131 DUP

2-184



exotherm down, N₂ purge gas
TEMP1: 25.0 °C TIME1: 0.0 min RATE1: 10.0 °C/min

Temperature (°C)

AD PURINTON
PERKIN-ELMER
7 Series Thermal Analysis System
Wed May 15 22:20:25 1996

WHC-SD-WM-DP-184, REV. 1

LABCORE Data Entry Template for Worklist#

9283

Analyst: BdV Instrument: DSC01 Book # _____

Method: LA-514-113 Rev/Mod _____

Worklist Comment: Dry DSC for U-107. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
96000422	U-107	1 SAMPLE	S96T001866	0 DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000422	U-107	2 DUP	S96T001866	0 DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry

Data entered + verified by Final page for worklist # 9283

Blandina Valenzuela

Date/

Analyst Signature

Date _____

Analyst Signature

Date/

Analyst Signature

Date _____

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist#

5890

Analyst: RCJ Instrument: TGA0 i Book # 75N0A
 Method: LA-560-112 Rev/Mod B-1

Worklist Comment: U-107 TGA RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		TGA-01	SOLID	<u>59.2</u>	<u>60.43*</u>	<u>N/A</u>	%
96000085	U-107	2 SAMPLE	S96T000650	0	TGA-01	SOLID	<u>N/A</u>	<u>22.19</u>	%
96000085	U-107	3 DUP	S96T000650	0	TGA-01	SOLID	<u>22.19</u>	<u>26.84</u>	%
96000085	U-107	4 SAMPLE	S96T000653	0	TGA-01	SOLID	<u>N/A</u>	<u>16.78</u>	%
96000085	U-107	5 DUP	S96T000653	0	TGA-01	SOLID	<u>16.78</u>	<u>17.43</u>	%

Final page for worklist # 5890

K. M. J. 3/6/96
 Analyst Signature Date

R. J. 3-6-96
 Analyst Signature Date

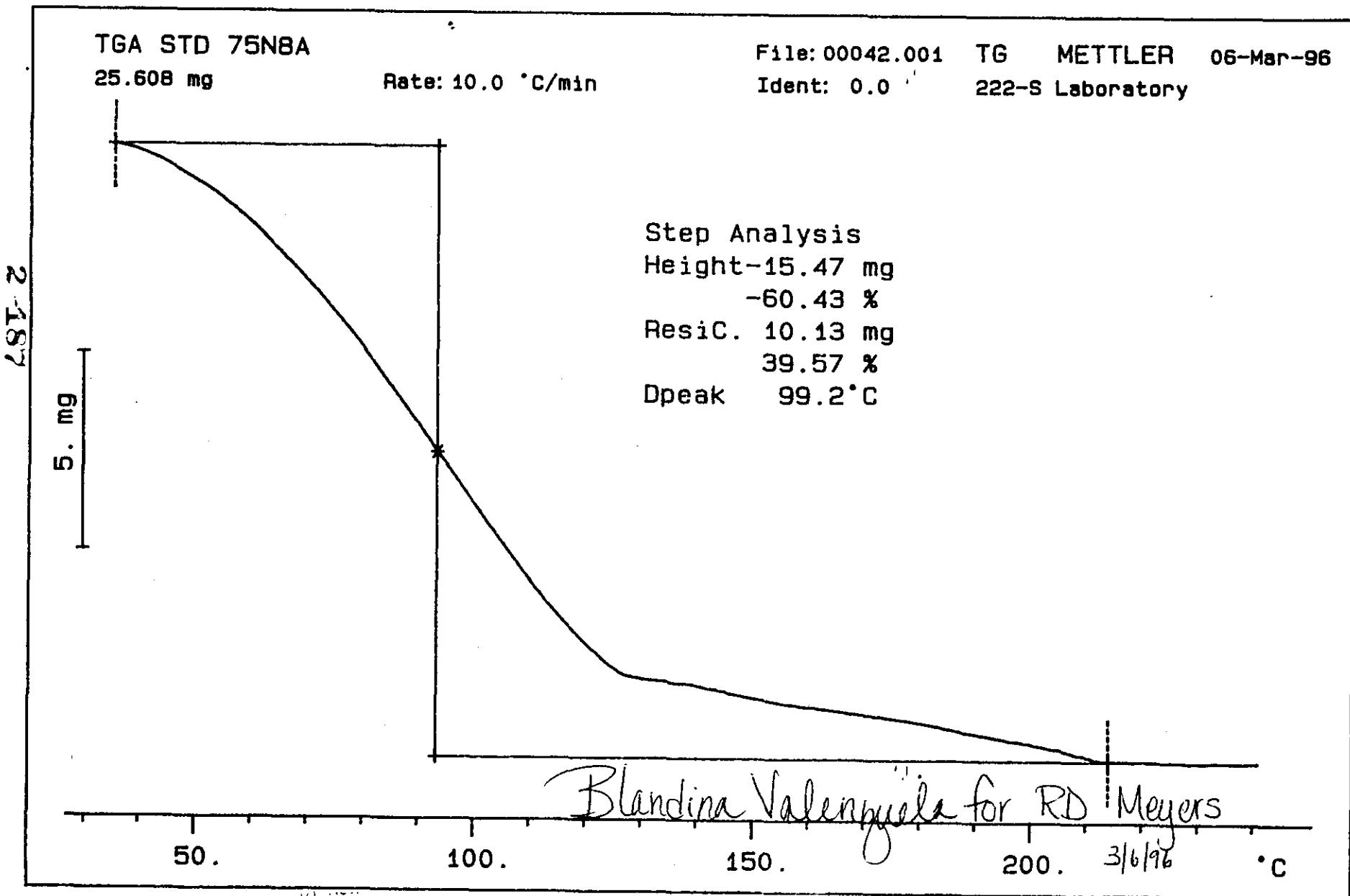
Verified by Blandina Valenzuela 3/7/96

Data Entry Comments:

3/6/96 S96T000650 results are the sum of two weight loss steps 3/6/96

S96T000653 results are the sum of two weight loss steps.

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.



SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 286 TO 291

S96T000650 N2

67.851 mg

Rate: 10.0 °C/min

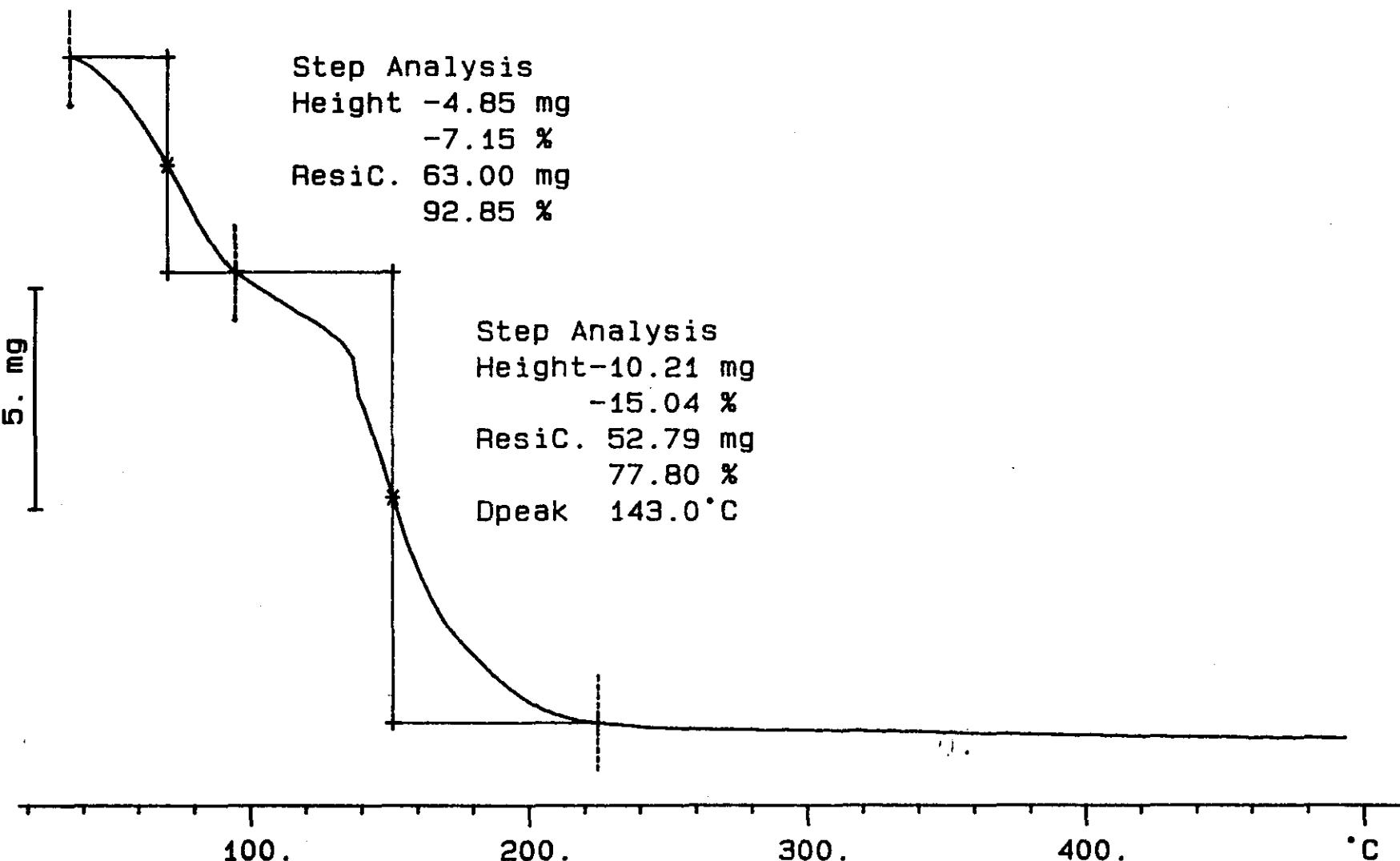
File: 00051.001 TG METTLER 06-Mar-96

Ident: 0.0 222-S Laboratory

Step Analysis
Height -4.85 mg
-7.15 %
ResiC. 63.00 mg
92.85 %

Step Analysis
Height-10.21 mg
-15.04 %
ResiC. 52.79 mg
77.80 %
Dpeak 143.0 °C

2-188



S96T000650DUP N2

49.194 mg

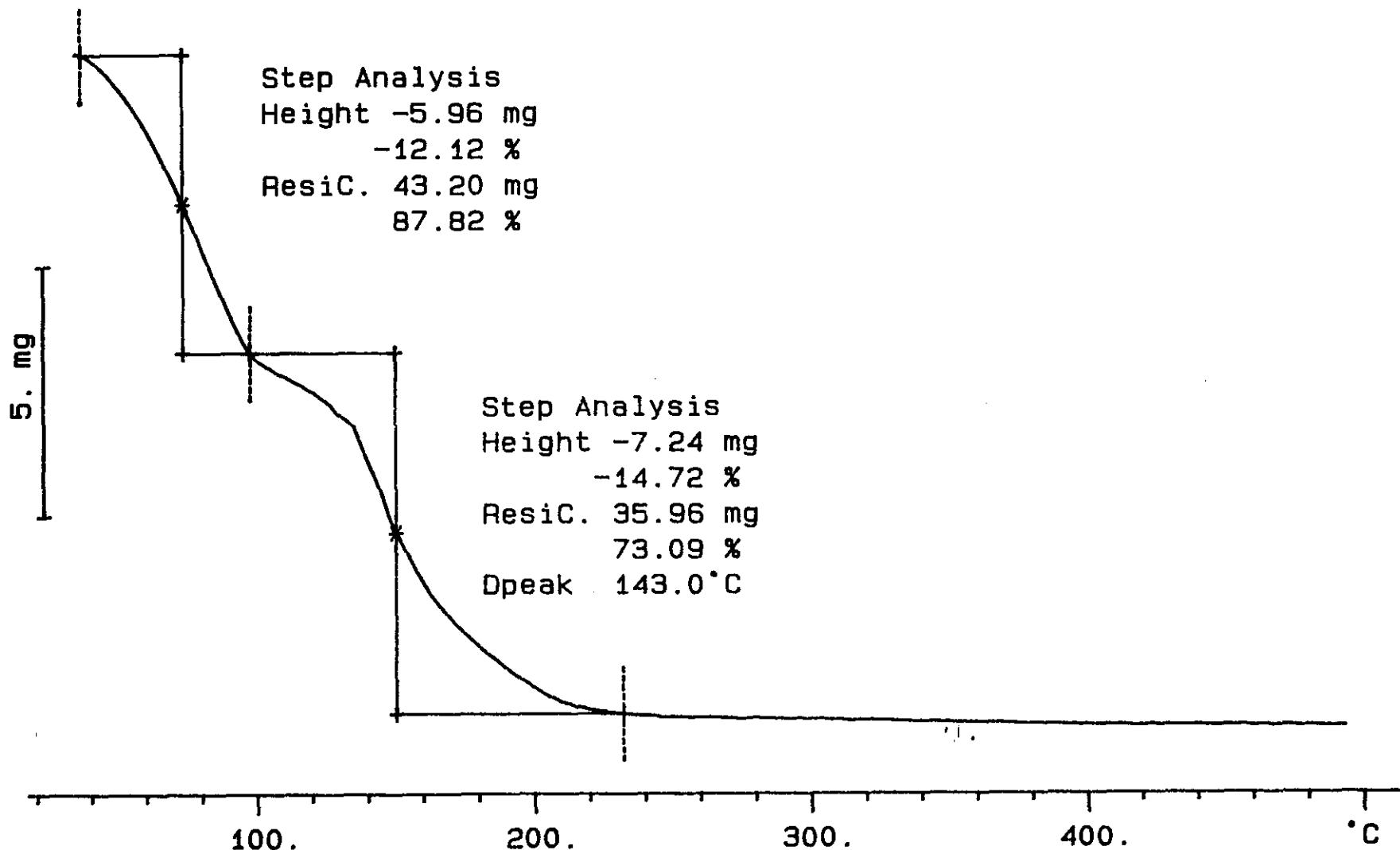
Rate: 10.0 °C/min

File: 00053.001 TG METTLER 06-Mar-96

Ident: 0.0 222-S Laboratory

Step Analysis
Height -5.96 mg
-12.12 %
ResiC. 43.20 mg
87.82 %

2-189



S96T000653 N2

77.143 mg

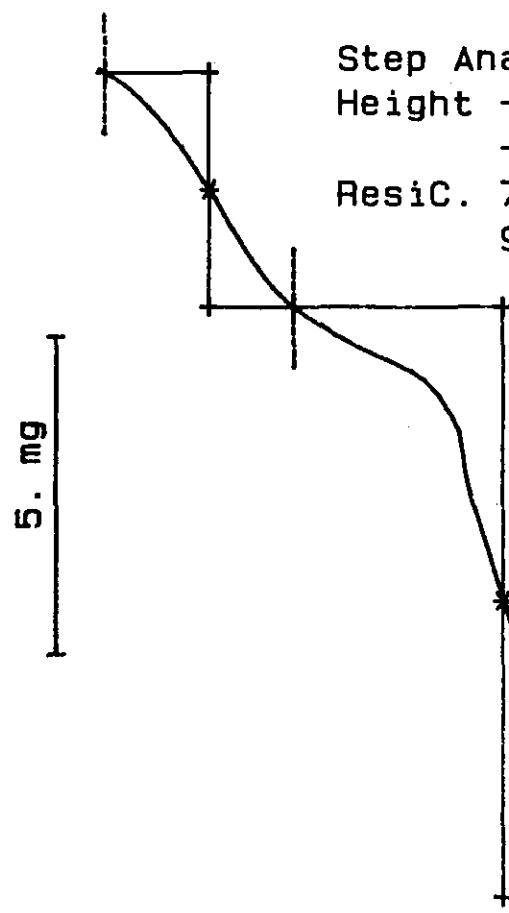
Rate: 10.0 °C/min

File: 00055.001 TG METTLER 07-Mar-96

Ident: 0.0 222-S Laboratory

Step Analysis
Height -3.67 mg
-4.75 %
ResiC. 73.42 mg
95.17 %

2.190



Step Analysis
Height -9.28 mg
-12.03 %
ResiC. 64.14 mg
83.15 %
Dpeak 145.0 °C

S96T000653DUP N2

50.690 mg

Rate: 10.0 °C/min

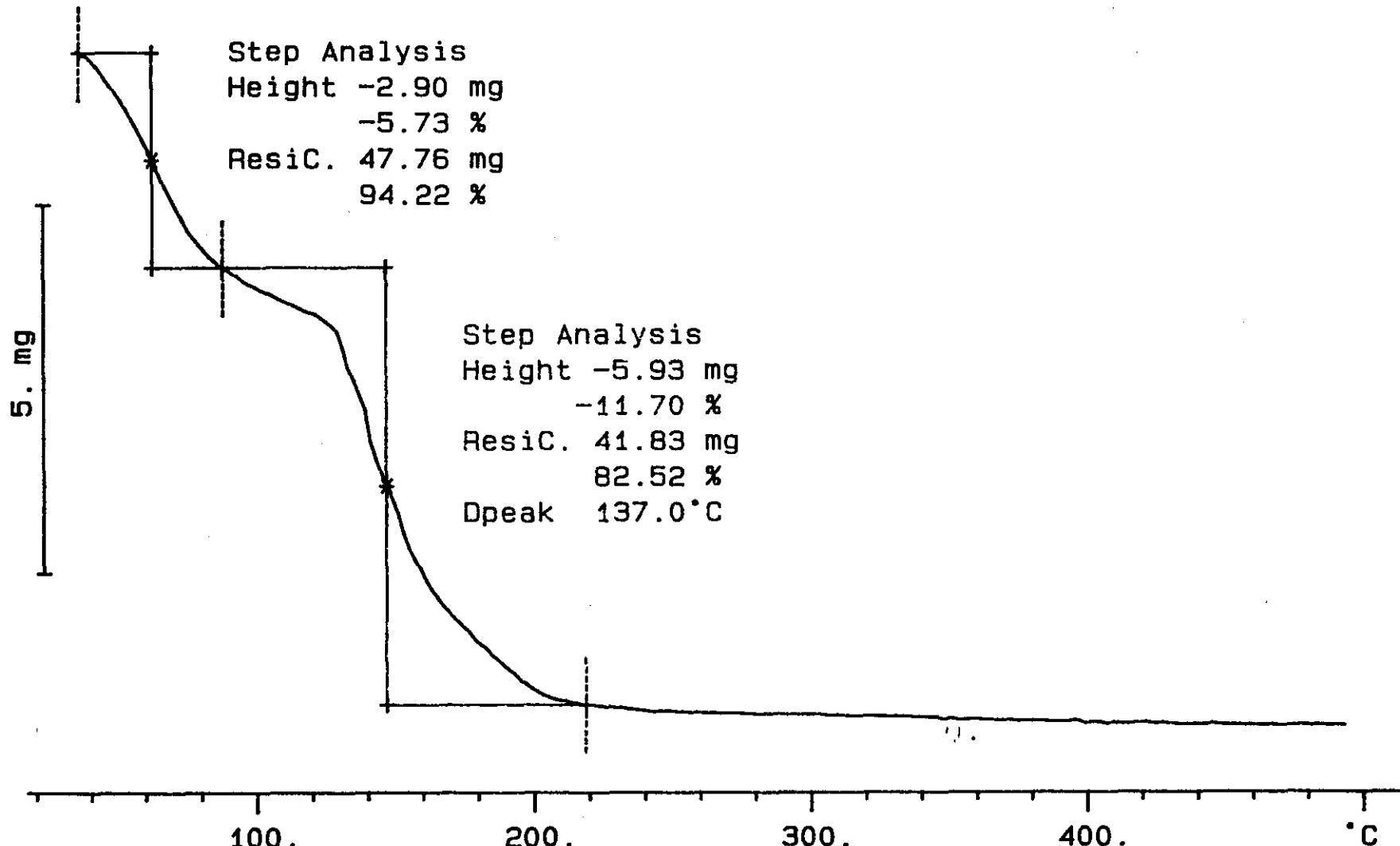
File: 00057.001 TG METTLER 07-Mar-96

Ident: 0.0 222-S Laboratory

Step Analysis
Height -2.90 mg
-5.73 %
ResiC. 47.76 mg
94.22 %

Step Analysis
Height -5.93 mg
-11.70 %
ResiC. 41.83 mg
82.52 %
Dpeak 137.0 °C

TG1



LABCORE Data Entry Template for Worklist#

5891

Analyst: RL McCownInstrument: TGA0 1Book # 75N8AMethod: LA-560-112 Rev/Mod B-1

Worklist Comment: U-107 TGA RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		TGA-01	SOLID	59.2	59.32	3/19/96 BY	%
96000085	U-107	2 SAMPLE	S96T000644	0	TGA-01	N/A	48.57		%
96000085	U-107	3 DUP	S96T000644	0	TGA-01	48.57	47.34	N/A	%
96000085	U-107	4 SAMPLE	S96T000647	0	TGA-01	N/A	21.1		%
96000085	U-107	5 DUP	S96T000647	0	TGA-01	21.1	18.26	N/A	%

Final page for worklist # 5891

RL McCown 3/6/96
Analyst Signature DateFrank Conk 3/12/96
Analyst Signature DateVerified by Blandina Valenzuela 3/18/96

Data Entry Comments: S96T000644 results are the sum of two weight loss steps
 S96T000647 results are the sum of two weight loss steps

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

2-192

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2-192 TO 2-197

TGA STD 75N8A

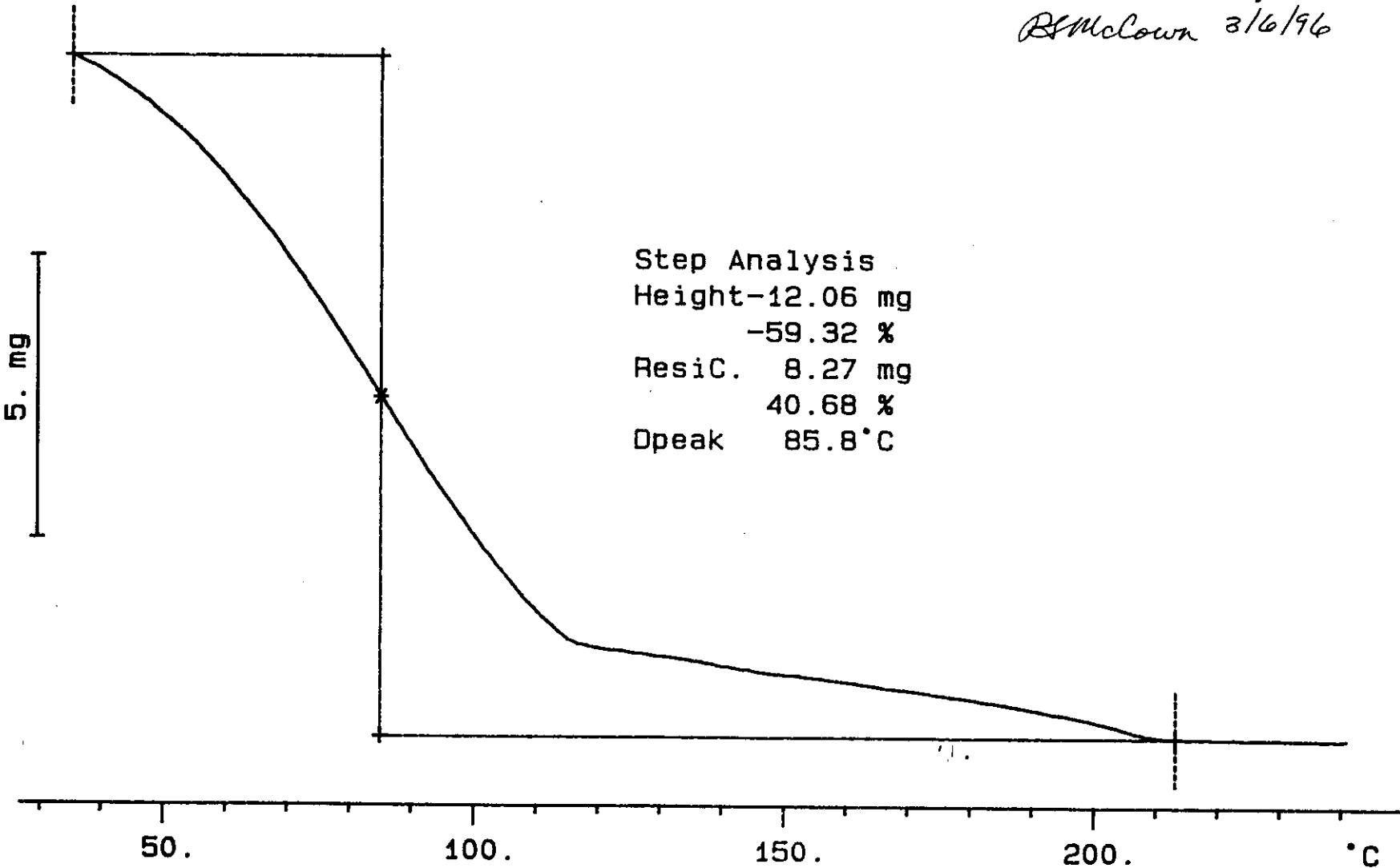
20.334 mg

Rate: 10.0 °C/min

File: 00059.001 TG METTLER 07-Mar-96
Ident: 0.0 222-S Laboratory

BG McClown 3/6/96

2-193



WHC-SD-WM-DP-184, REV.

S96T000644 SAM N2

34.073 mg

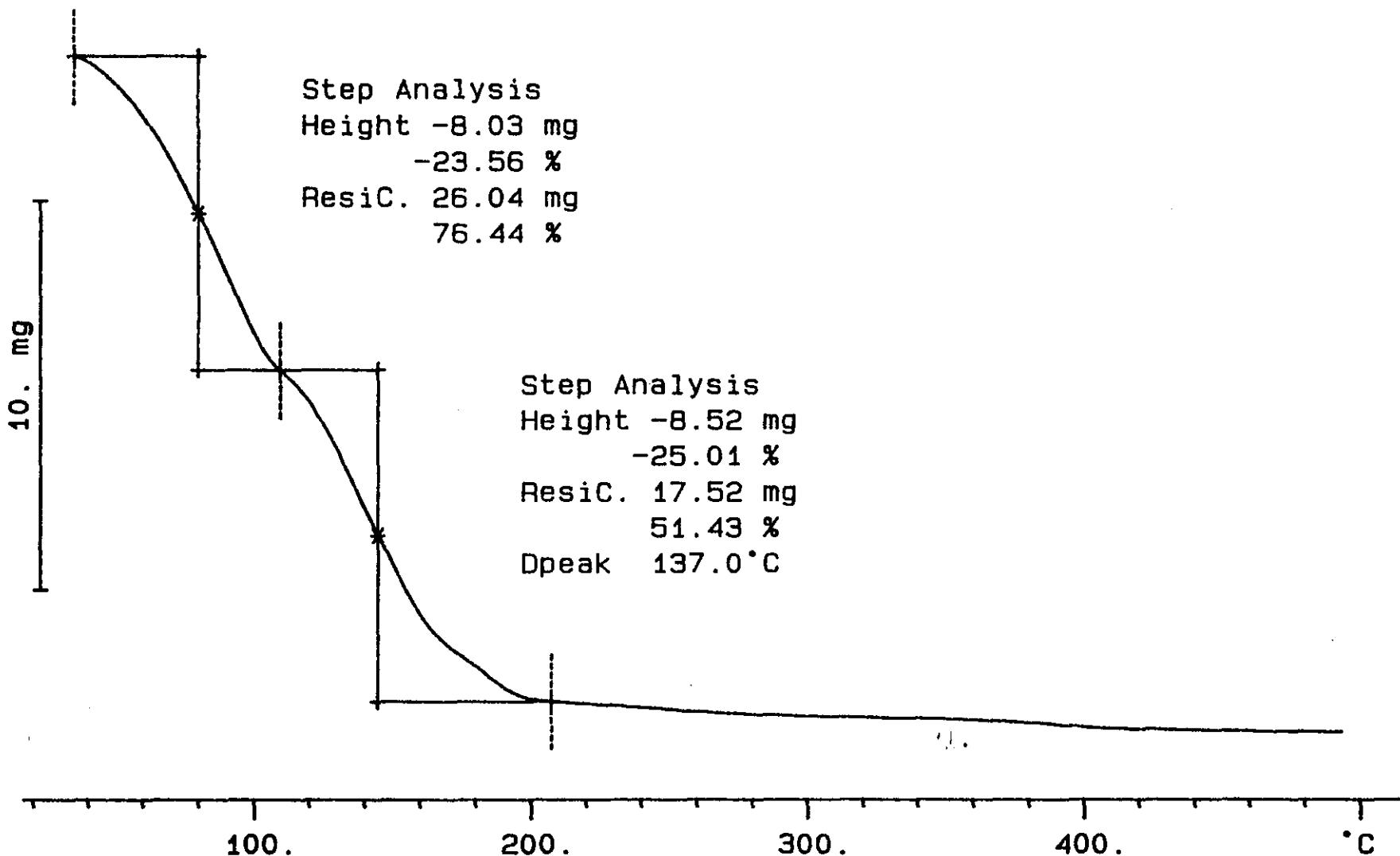
Rate: 10.0 °C/min

File: 00061.001 TG METTLER 06-Mar-96

Ident: 0.0 222-S Laboratory

Step Analysis
Height -8.03 mg
-23.56 %
ResiC. 26.04 mg
76.44 %

2-194



WRC-SJW

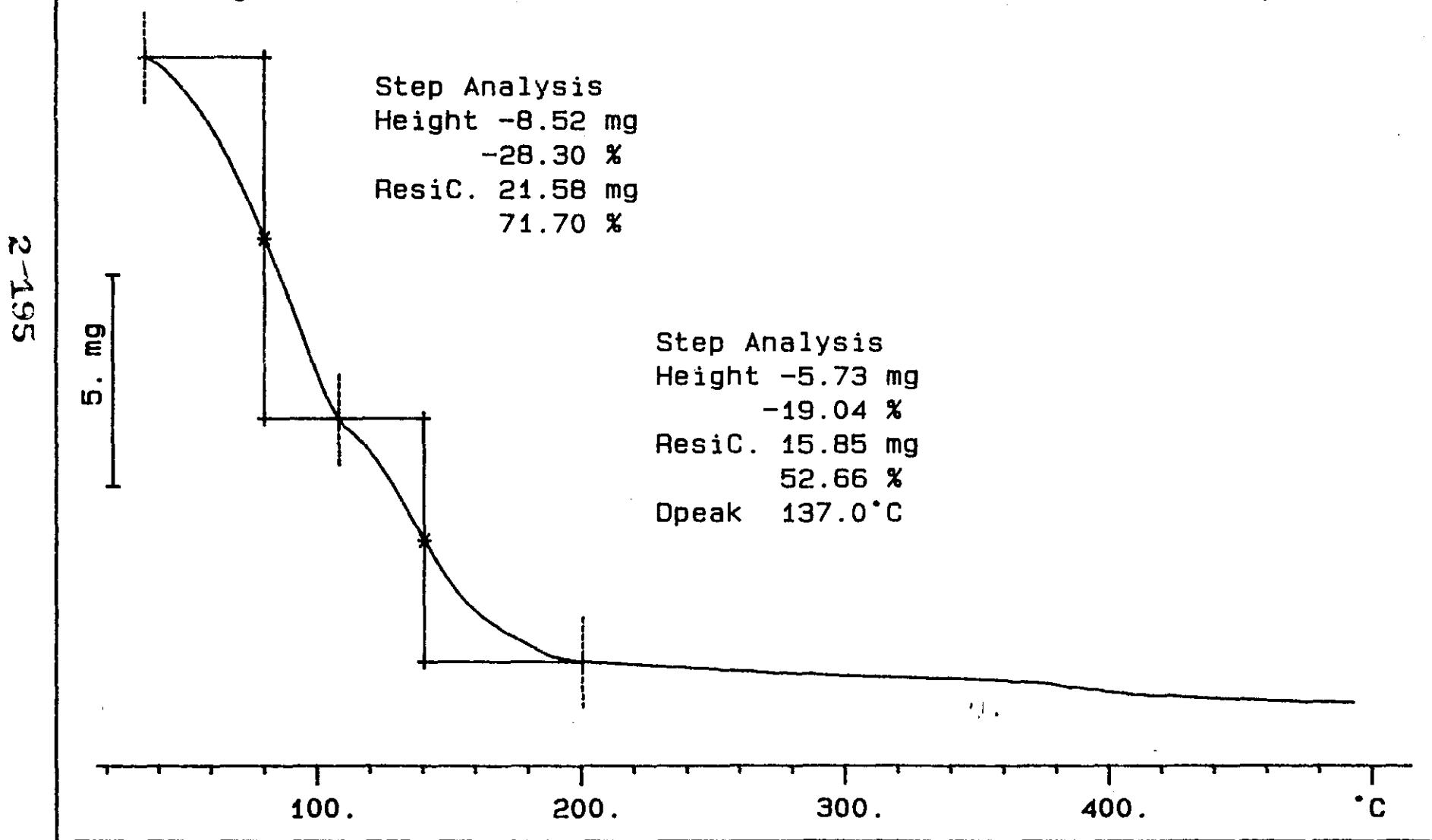
S96T000644 DUP N2

30.100 mg

Rate: 10.0 °C/min

File: 00063.001 TG METTLER 06-Mar-96

Ident: 0.0 222-S Laboratory



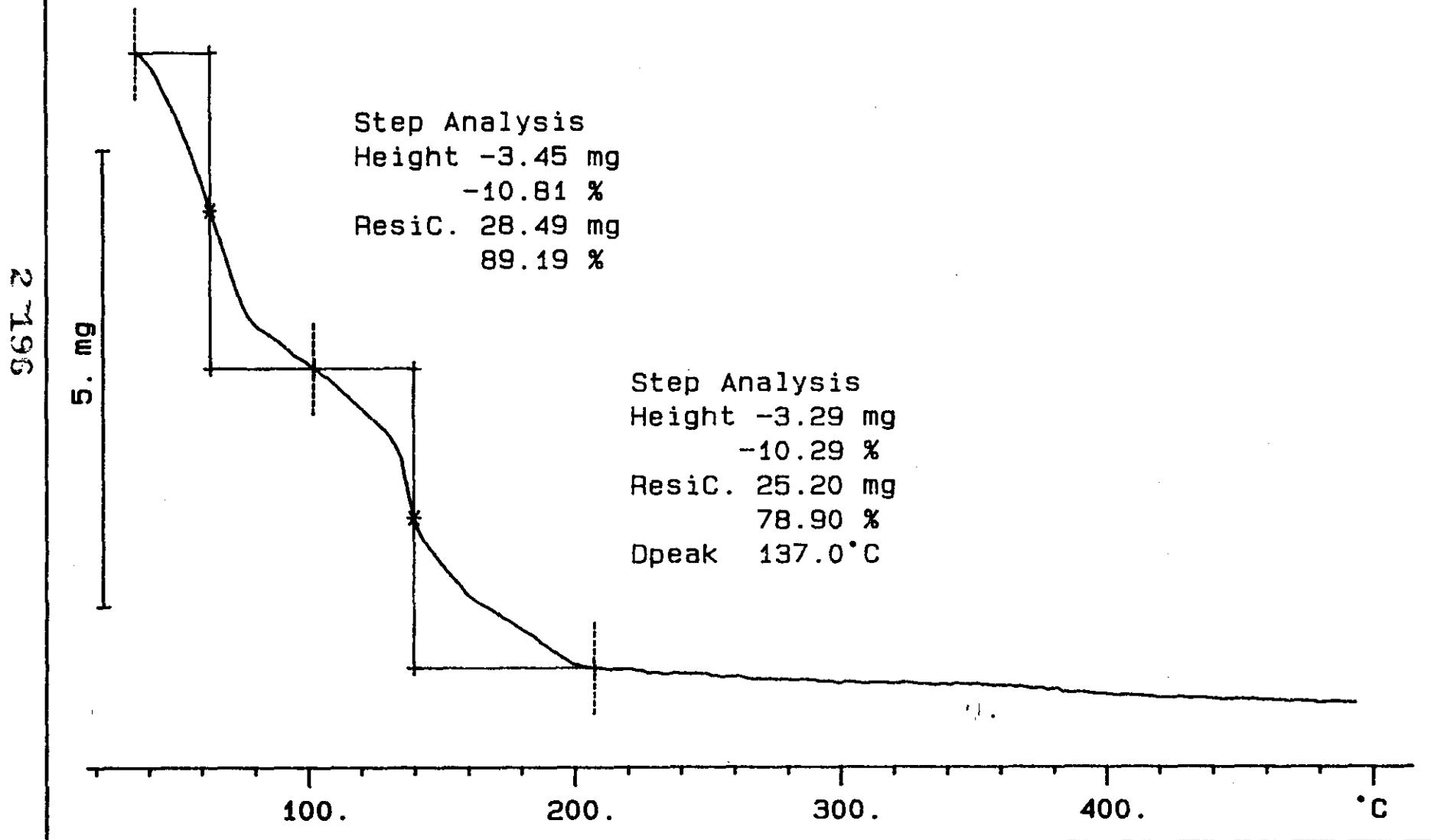
S96T000647 SAM N2

31.939 mg

Rate: 10.0 °C/min

File: 00065.001 TG METTLER 06-Mar-96

Ident: 0.0 222-S Laboratory



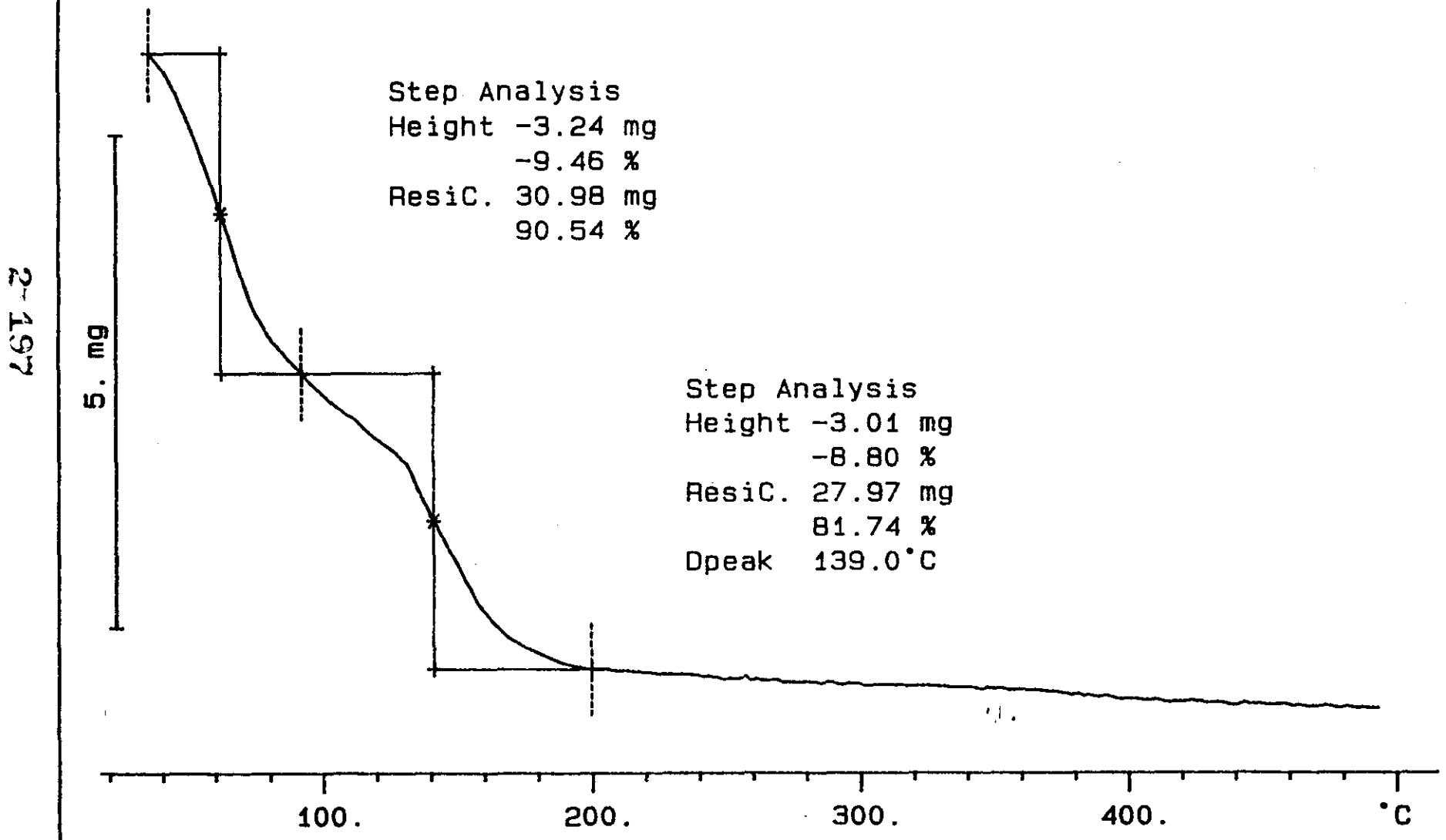
S96T000647 DUP N2

34.217 mg

Rate: 10.0 °C/min

File: 00067.001 TG METTLER 06-Mar-96

Ident: 0.0 222-S Laboratory



LABCORE Data Entry Template for Worklist#

6027

Analyst: SMF Instrument: TGA0 1 Book # 75N8AMethod: LA-560-112 Rev/Mod B-1

Worklist Comment: U-107 TGA-01 RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		TGA-01	SOLID	<u>59.2</u>	<u>60.58*</u>	<u>N/A</u>	%
96000085	U-107	2 SAMPLE	S96T000683 0	TGA-01	SOLID	<u>N/A</u>	<u>18.62</u>		%
96000085	U-107	3 DUP	S96T000683 0	TGA-01	SOLID	<u>18.52</u>	<u>19.37</u>	<u>N/A</u>	%

Final page for worklist # **6027**Susie M. Julian 3-5-96
Analyst Signature DateRH 3/7/96
Analyst Signature DateVerified by Blandina Valenzuela
3/7/96

Data Entry Comments:

The results given are the sum of two weight loss steps.

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2999 TO 3201

TGA STD 75N8A

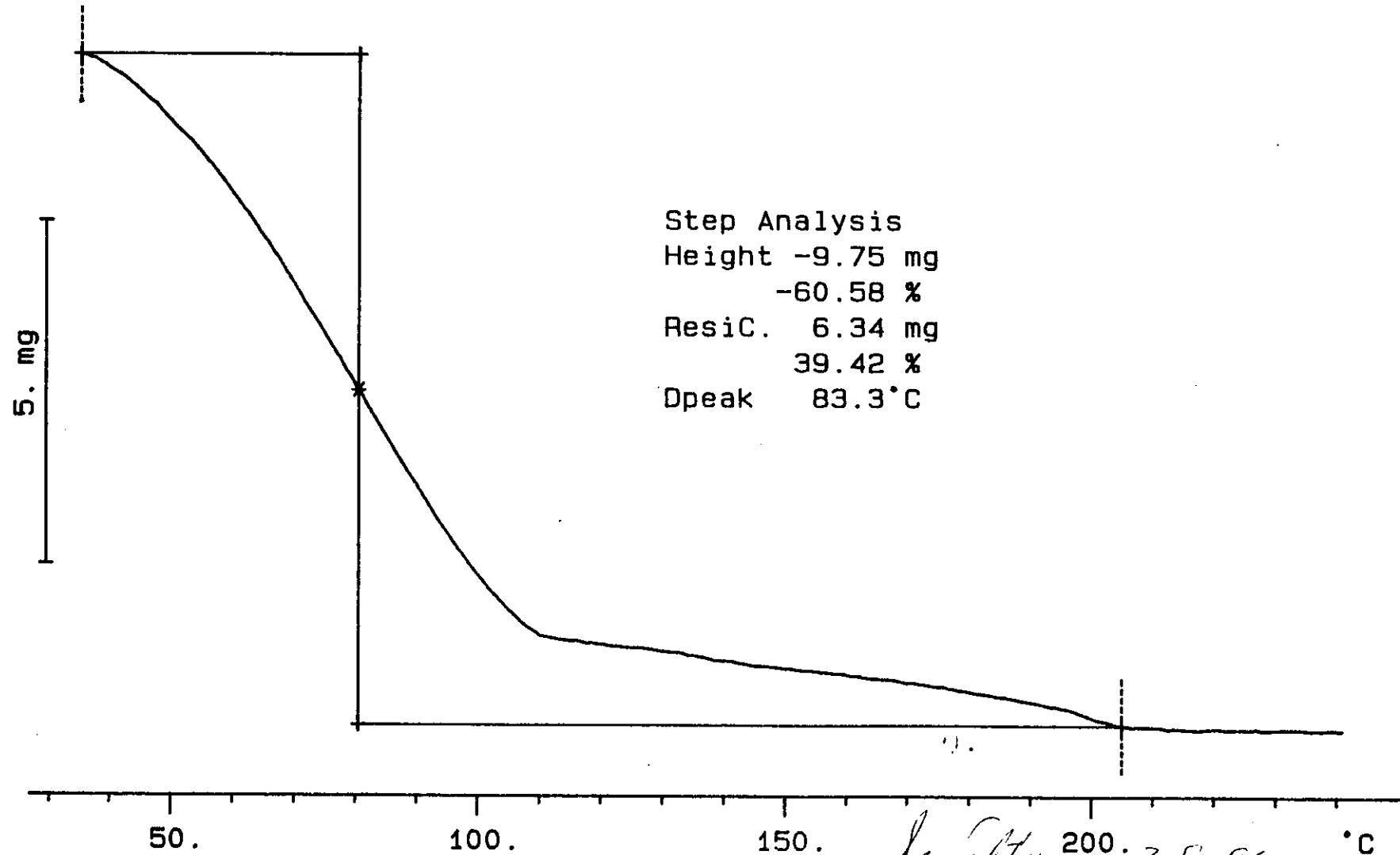
16.087 mg

Rate: 10.0 °C/min

File: 00032.001 TG METTLER 05-Mar-96

Ident: 0.0 222-S Laboratory

Step Analysis
Height -9.75 mg
-60.58 %
ResiC. 6.34 mg
39.42 %
Dpeak 83.3 °C



S96T000683 N2

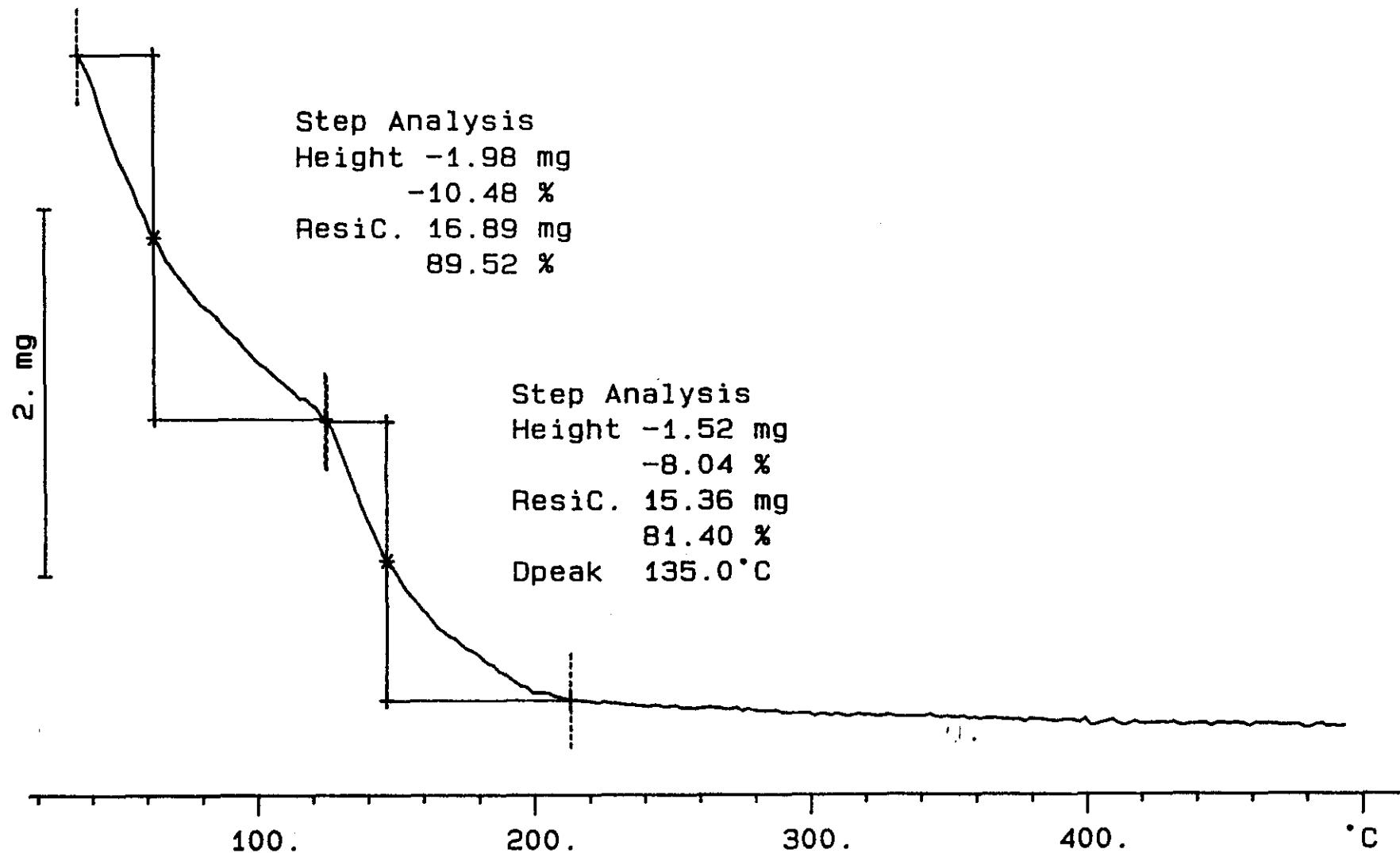
16.868 mg

Rate: 10.0 °C/min

File: 00038.001 TG METTLER 06-Mar-96

Ident: 0.0 222-S Laboratory

2-260



S96T000683 DUP N2

28.499 mg

Rate: 10.0 °C/min

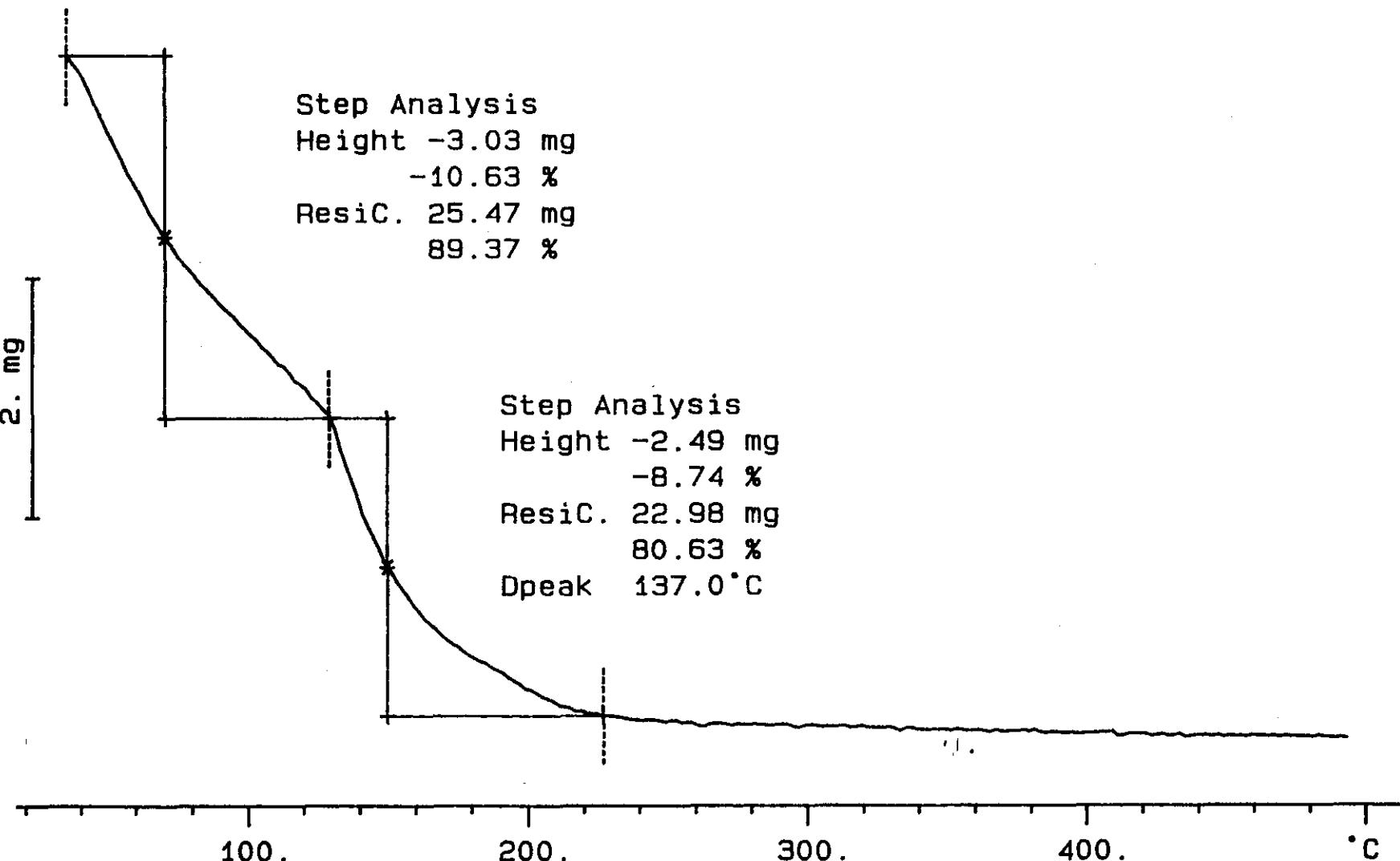
File: 00040.001 TG METTLER 06-Mar-96

Ident: 0.0 222-S Laboratory

Step Analysis
Height -3.03 mg
-10.63 %
ResiC. 25.47 mg
89.37 %

Step Analysis
Height -2.49 mg
-8.74 %
ResiC. 22.98 mg
80.63 %
Dpeak 137.0 °C

2201



WHC-SD-WM-DP-184, REV. 1

worklist rpt Version 2.1 05/15/95

04/16/96 15:44

Page: 1

LABCORE Data Entry Template for Worklist#

6499

Analyst: SMF Instrument: TGA0 3 Book # 82N8AMethod: LA-514-114 Rev/Mod C-1

Worklist Comment: U-107 TGA RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		TGA-03	SOLID	<u>59.2</u>	<u>59.37</u>	*	%
96000126	U-107	2 SAMPLE	S96T001055 0	TGA-03	SOLID	<u>N/A</u>	<u>6.94</u>	<u>4/16/96</u>	BDL %
96000126	U-107	3 DUP	S96T001055 0	TGA-03	SOLID	<u>6.94</u>	<u>7.60</u>	<u>N/A</u>	%
96000126	U-107	4 SAMPLE	S96T001056 0	TGA-03	SOLID	<u>N/A</u>	<u>13.12</u>	<u>-</u>	%
96000126	U-107	5 DUP	S96T001056 0	TGA-03	SOLID	<u>13.12</u>	<u>12.26</u>	<u>N/A</u>	%

Final page for worklist # **6499**See attached for signatures

Analyst Signature

Date

4/16/96

BBV

Verified by
HAnastor 4-22-96

RHeck 04/19/96

Analyst Signature

Date

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

2-202

WHC-SD-WM-DP-184, REV. 1

worklistprt Version 2.1 05/15/95
03/14/96 13:29

Page: 1

LABCORE Data Entry Template for Worklist#**6499**Analyst: SMF Instrument: TGA0 Book # 82N8A

Method: LA-560-112 Rev/Mod

Worklist Comment: U-107 TGA RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID		N/A	%
96000126	U-107	2 SAMPLE	S96T001055	0	TGA-01	SOLID	N/A		%
96000126	U-107	3 DUP	S96T001055	0	TGA-01	SOLID		N/A	%
96000126	U-107	4 SAMPLE	S96T001056	0	TGA-01	SOLID	N/A		%
96000126	U-107	5 DUP	S96T001056	0	TGA-01	SOLID		N/A	%

Final page for worklist # **6499**Susie M. Dalton 4-15-96

Analyst Signature Date

Analyst Signature Date

Other instrument
was used

4/16/96
BON

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

4009

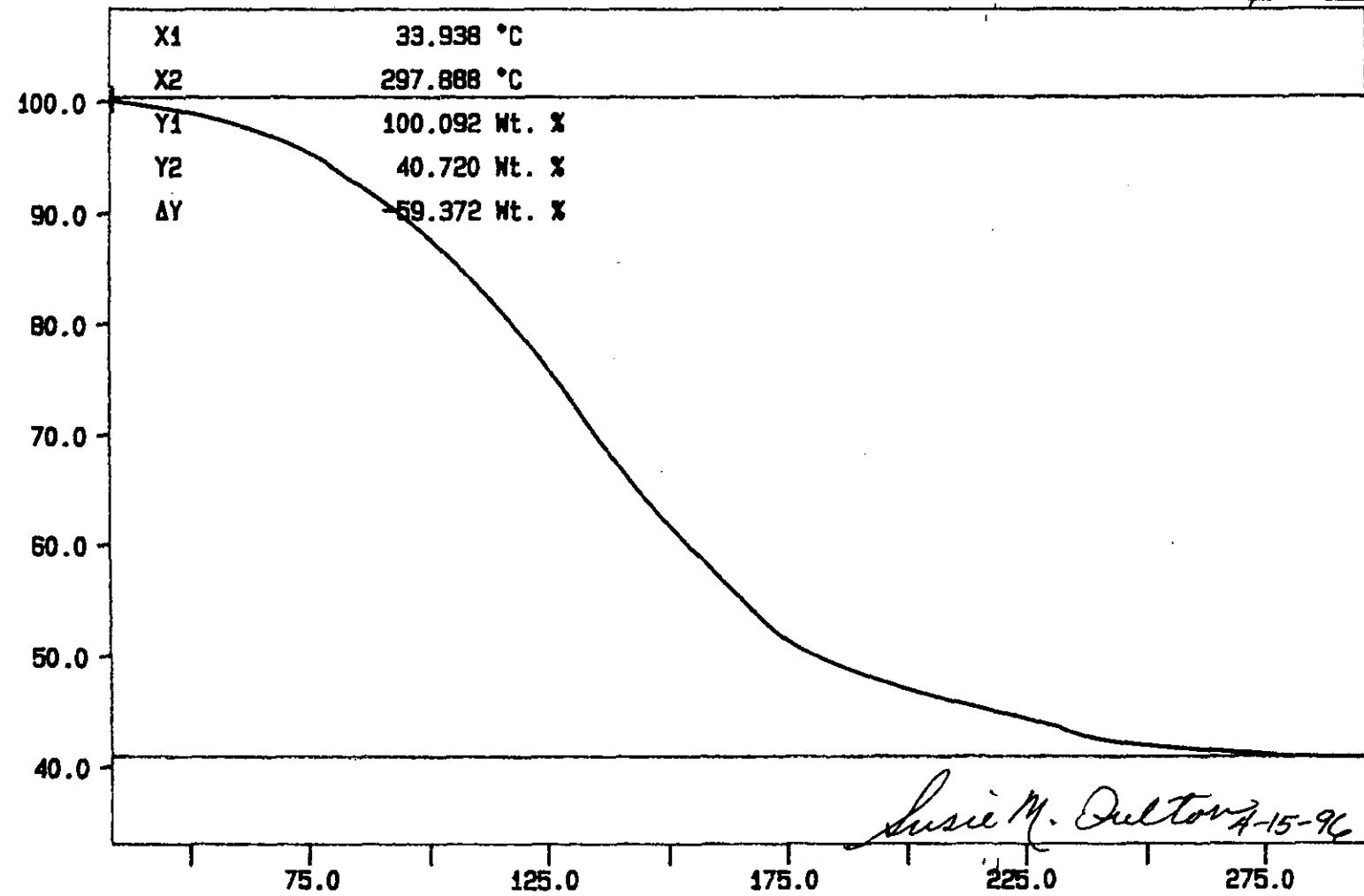
Curve 1: TGA

File info: TER041501 Mon Apr 15 06:12:10 1996

Sample Weight: 21.445 mg

TGA STD 82N8-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2024 TO 2028



WESTINGHOUSE

2-264

509 372 2929

10:56

04/18/96

N2 10C/MIN
TEMP: 30.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Apr 15 06:18:26 1996

WHC-SD-WM-DP-184, REV. 1

41010

→→ MU-924 ZOOM

WESTINGHOUSE

2509 372 2929

10:57

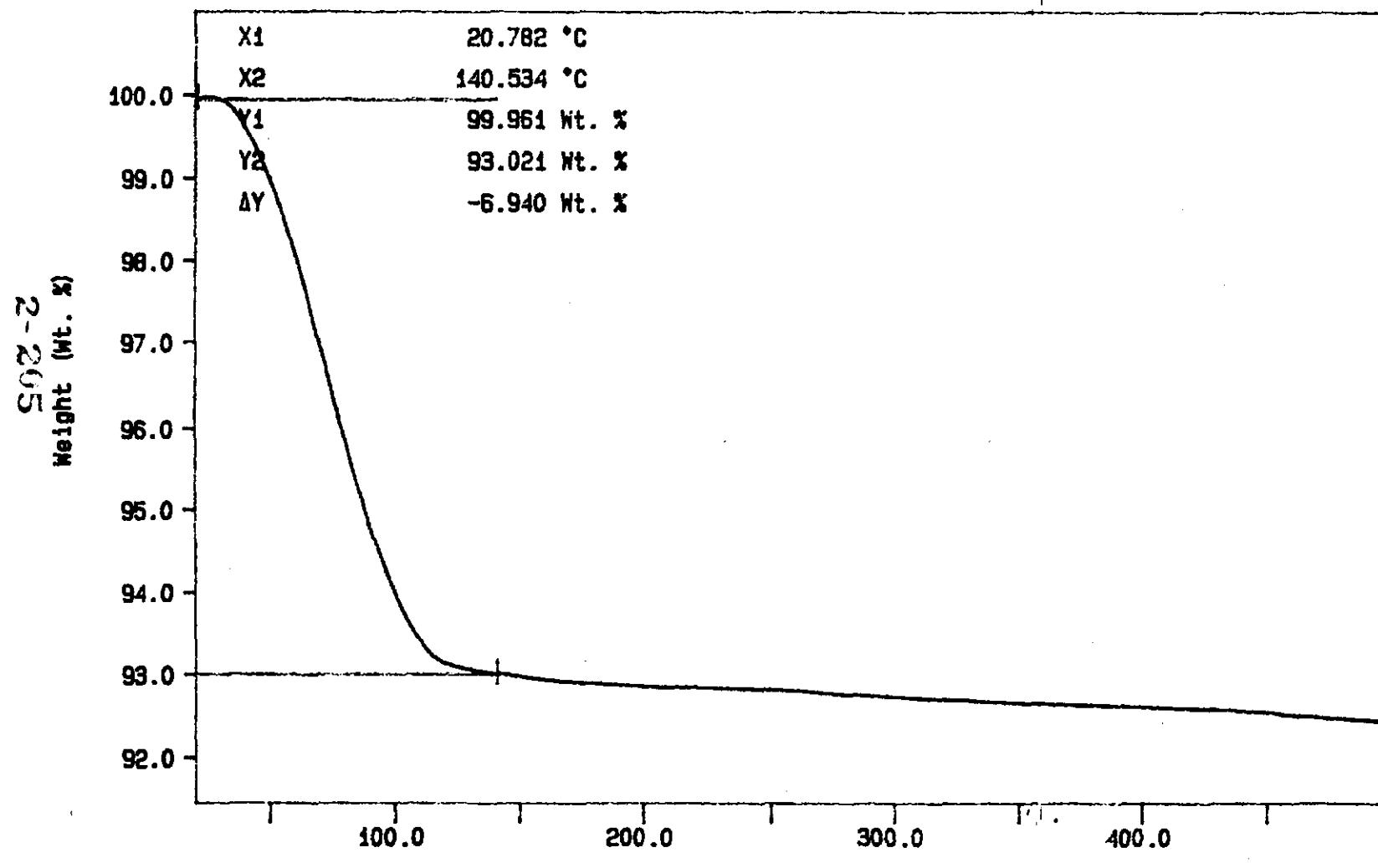
04/18/96

Curve 1: TGA

File info: SAM041504 Mon Apr 15 07:35:48 1996

Sample Weight: 12.179 mg

S96T001055



10C/MIN N2
TEMP: 25.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

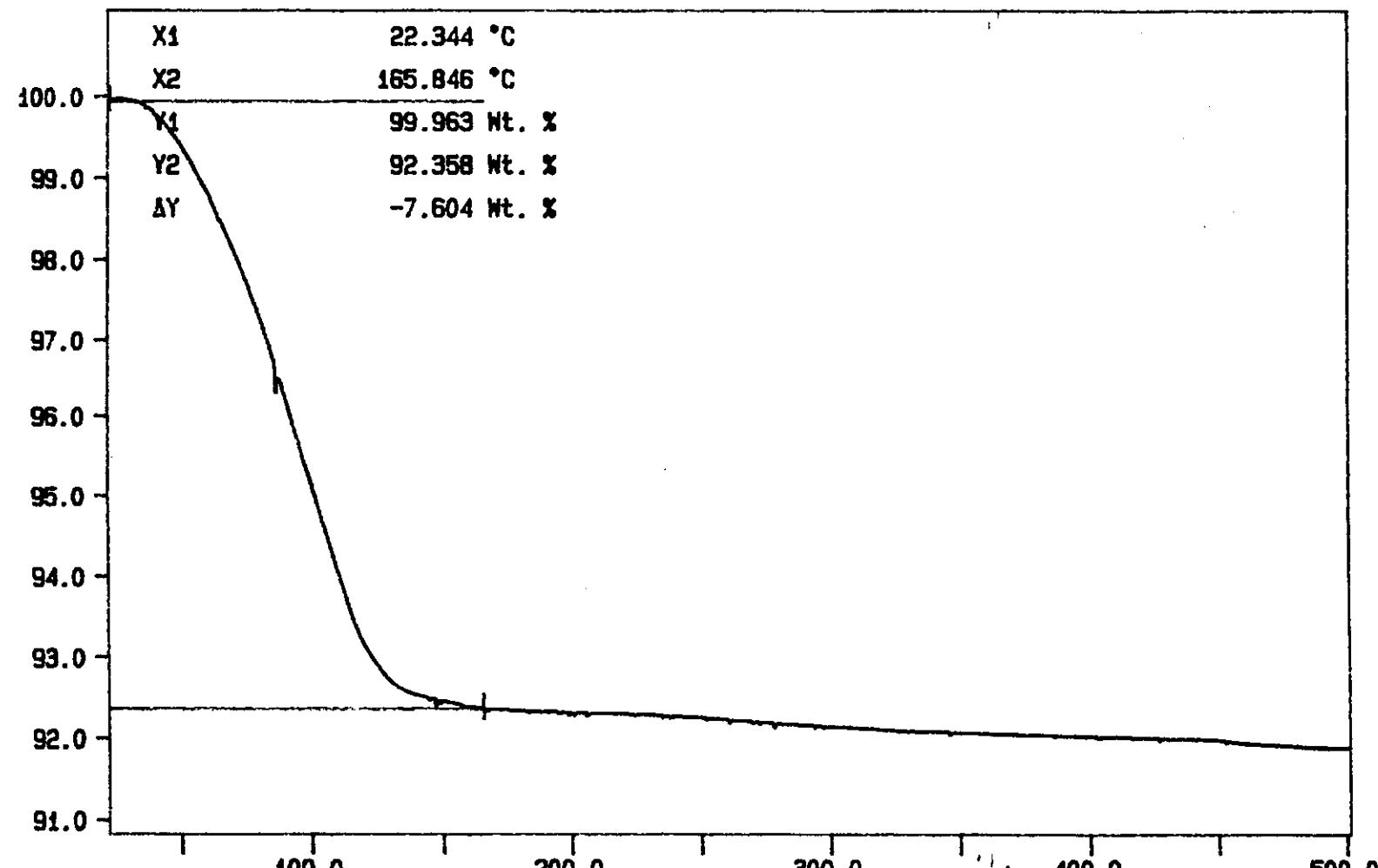
SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Apr 15 08:34:51 1996

Curve 1: TGA

File info: SAM041505 Mon Apr 15 09:27:07 1996

Sample Weight: 21.256 mg

S96T001055 DUP



10C/MIN N2

TEMP: 3.0 °C RATE: 10.0 °C/min

04/18/96

10:57

WESTINGHOUSE
++> MU-924 200W

9002-2

Temperature (°C)

SM FULTON

PERKIN-ELMER

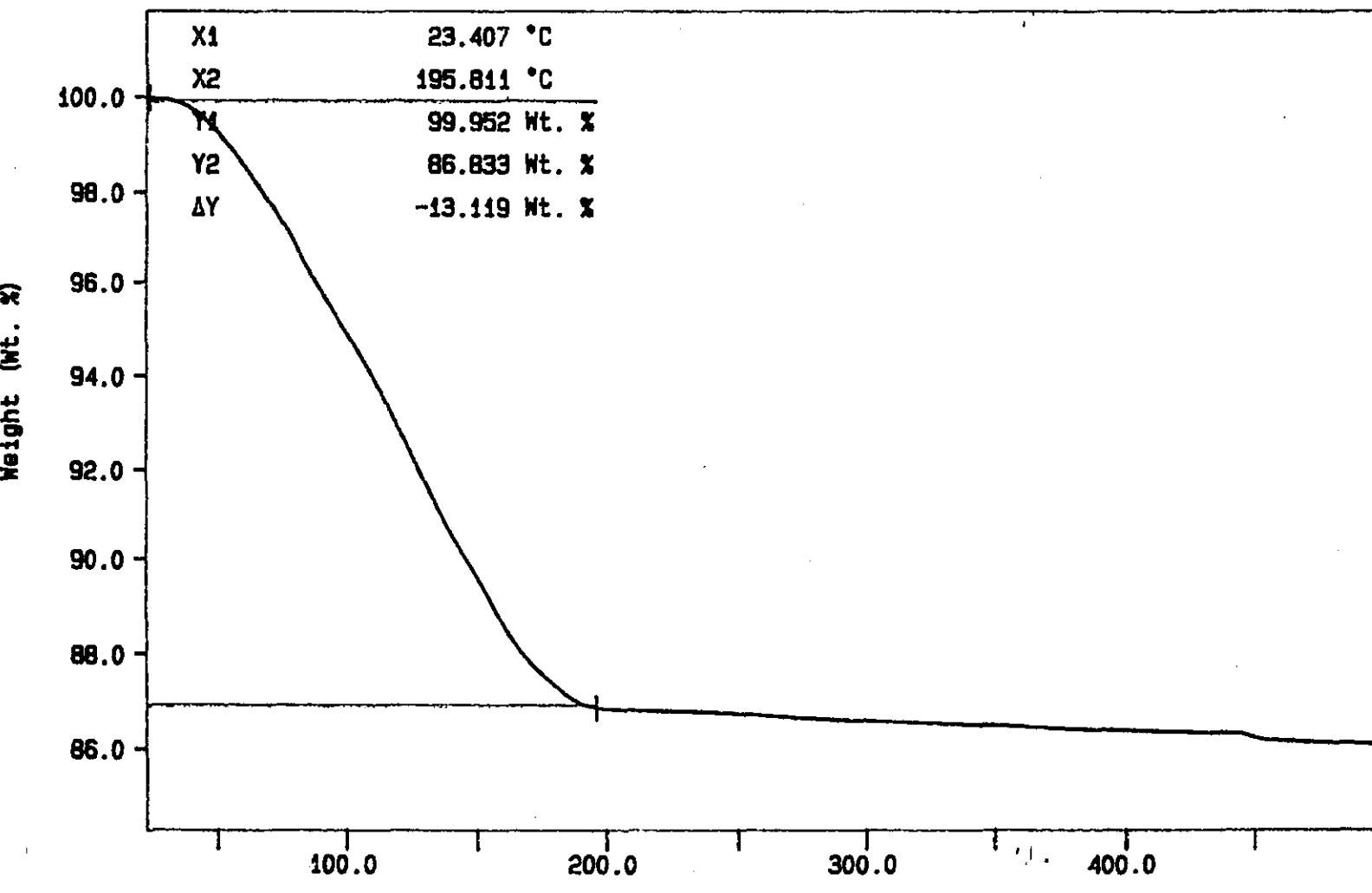
7 Series Thermal Analysis System
Mon Apr 15 12:26:16 1996

Curve 1: TGA

File info: SAM041506 Mon Apr 15 13:21:51 1996

Sample Weight: 22.822 mg

S96T001056



10C/MIN N2
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 200.0 C

Temperature (°C)

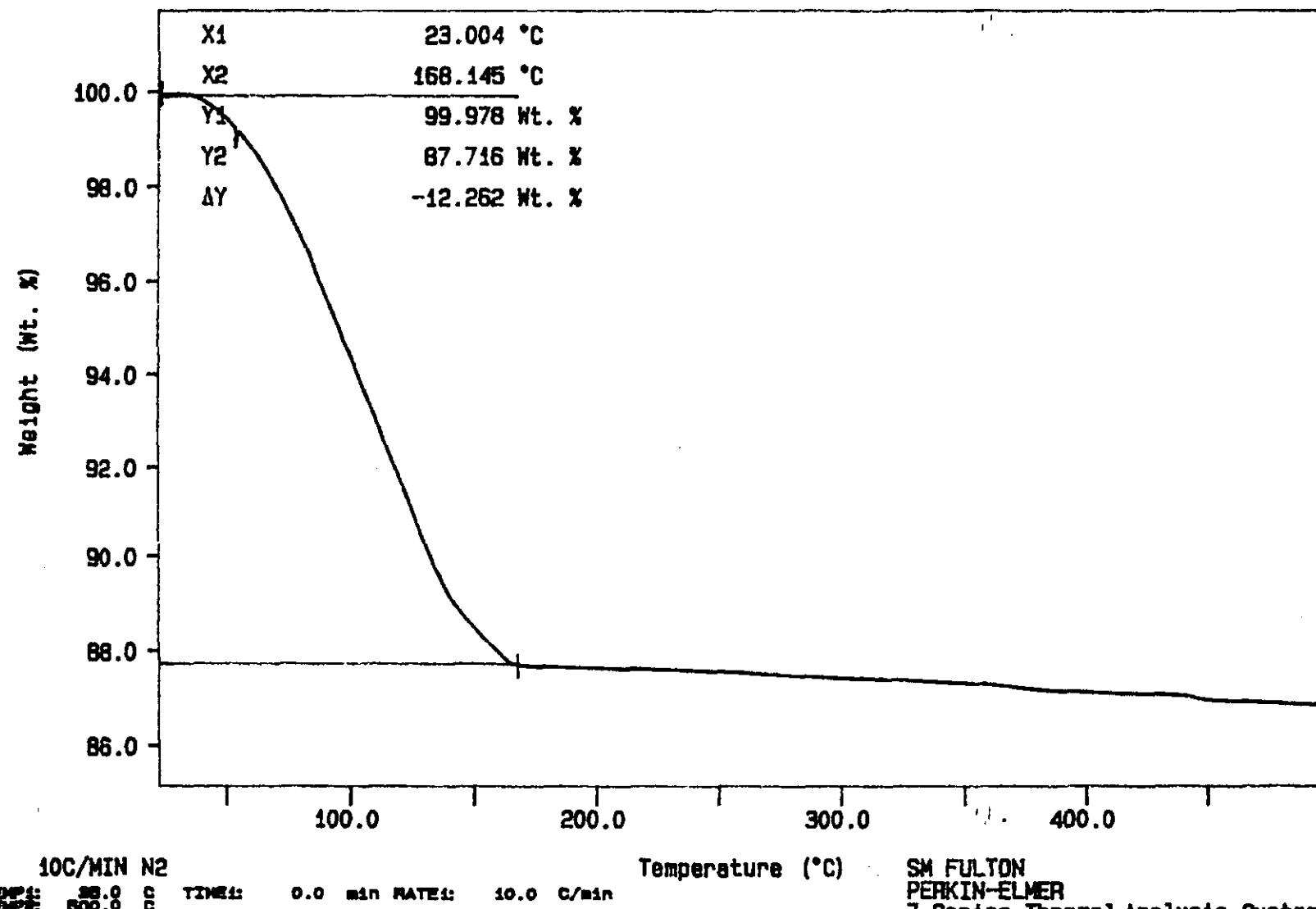
SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Apr 15 13:37:22 1996

Curve 1: TGA

File info: SAM041507 Mon Apr 15 14:38:55 1996

Sample Weight: 17.932 mg

S96T001056 DUP



SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Apr 15 15:30:49 1996

WHC-SD-WM-DP-184, REV. /

worklist rpt Version 2.1 05/15/95

04/17/96 11:54

Page: 1

LABCORE Data Entry Template for Worklist#**6500**Analyst: JDS Instrument: TGA0 1 Book # 82N8AMethod: LA-560-112 Rev/Mod B-1

Worklist Comment: U-107 TGA RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		TGA-01	SOLID	<u>59.2</u>	<u>59.18*</u>	N/A	%
96000126	U-107	2 SAMPLE	S96T001057 0	TGA-01	SOLID	<u>N/A</u>	<u>34.53</u>		%
96000126	U-107	3 DUP	S96T001057 0	TGA-01	SOLID	<u>34.53</u>	<u>39.23</u>	N/A	%
96000126	U-107	4 SAMPLE	S96T001058 0	TGA-01	SOLID	<u>N/A</u>	<u>44.21</u>		%
96000126	U-107	5 DUP	S96T001058 0	TGA-01	SOLID	<u>44.21</u>	<u>28.19</u>	N/A	%
96000126	U-107	6 TRIP	S96T001058 0	TGA-01	SOLID	<u>44.21</u>	<u>37.14</u>	N/A	%

Final page for worklist # **6500**See attached for signatures

Analyst Signature

Date

4/17/96

Analyst Signature

Date

Verified by Blandina Valenzuela

4-22-96

Data Entry Comments: S96T001057 produced an additional weight loss step of 1.67%

S96T001058 results are the sum of two weight loss steps. A trip was run because of the difference b/wn thermograms.

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

2-209

worklistrpt Version 2.1 05/15/95
03/14/96 13:31

WHC-SD-WM-DP-184, REV. 1

Page: 1

LABCORE Data Entry Template for Worklist#**6500**Analyst: Jcls Instrument: TGA0 Book # 8ZN8A

Method: LA-560-112 Rev/Mod

Worklist Comment: U-107 TGA RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID		N/A	%
96000126	U-107	2 SAMPLE	<u>S96T001057</u> 0		TGA-01	SOLID	<u>N/A</u>		%
96000126	U-107	3 DUP	<u>S96T001057</u> 0		TGA-01	SOLID		N/A	%
96000126	U-107	4 SAMPLE	<u>S96T001058</u> 0		TGA-01	SOLID	<u>N/A</u>		%
96000126	U-107	5 DUP	<u>S96T001058</u> 0		TGA-01	SOLID		N/A	%

Final page for worklist # **6500**Jcl Sgn 4/17/96
Analyst Signature DateReight 4/18/96
Analyst Signature Date

Data Entry Comments:

Ran a Trip on S96T001058

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

2-210

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2011 TO 2016

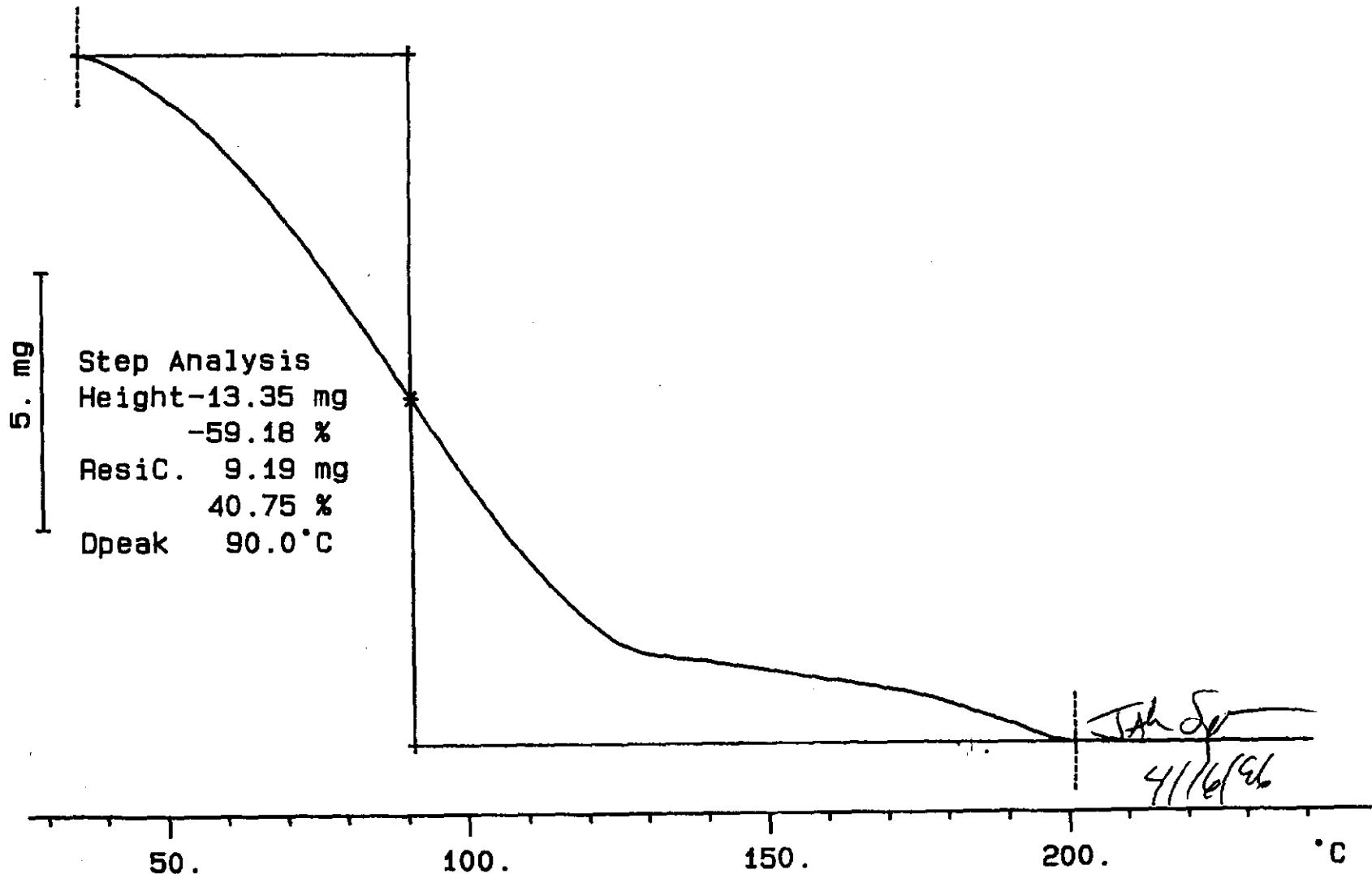
TGA STD 82N8A

22.553 mg

Rate: 10.0 °C/min

File: 00041.001 TG METTLER 16-Apr-96
Ident: 0.0 222-S Laboratory

2-211



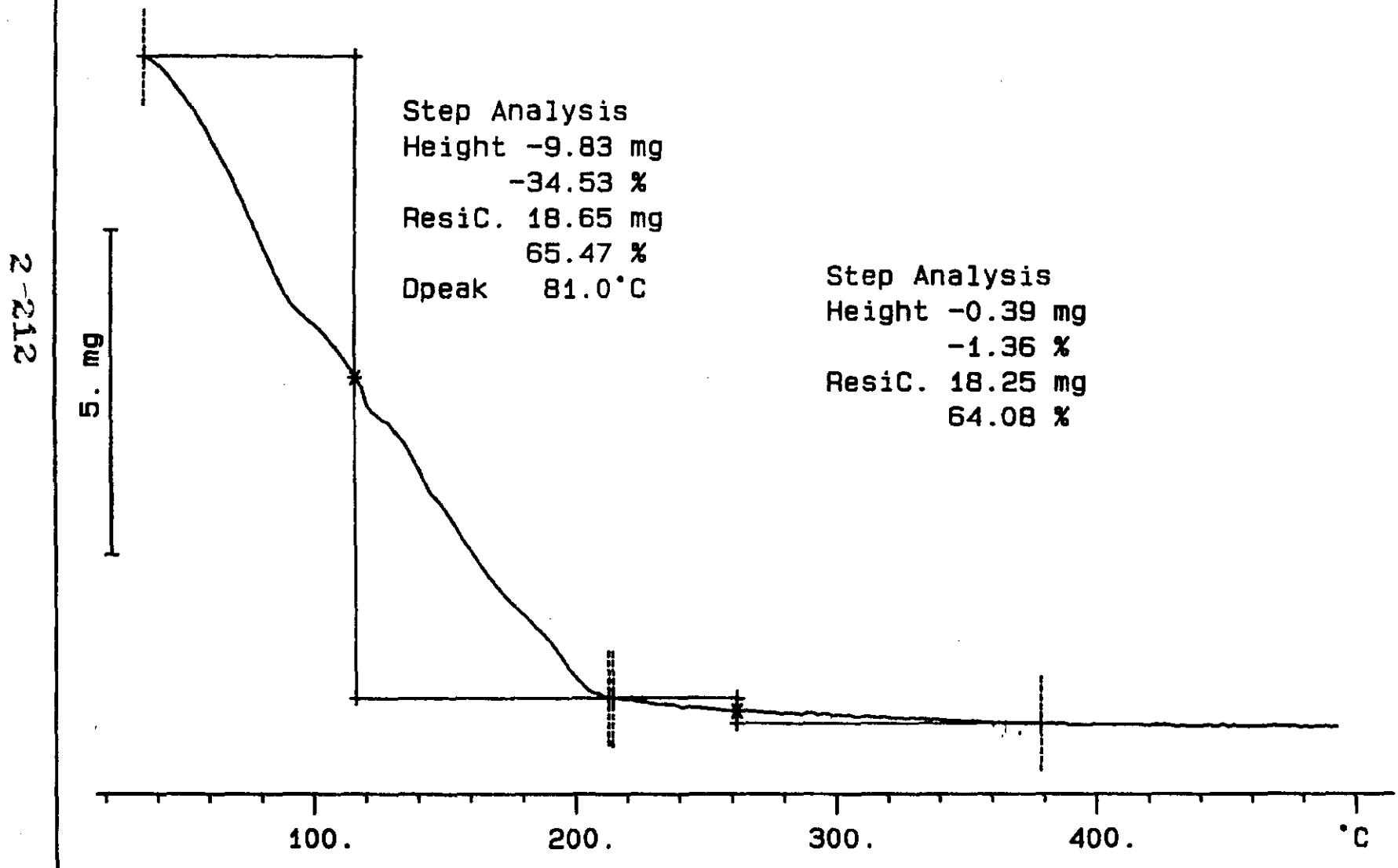
04/17/96 14:15 2509 372 2929

S96T001057 N2

28.482 mg

Rate: 10.0 °C/min

File: 00052.001 TG METTLER 16-Apr-96
Ident: 0.0 222-S Laboratory



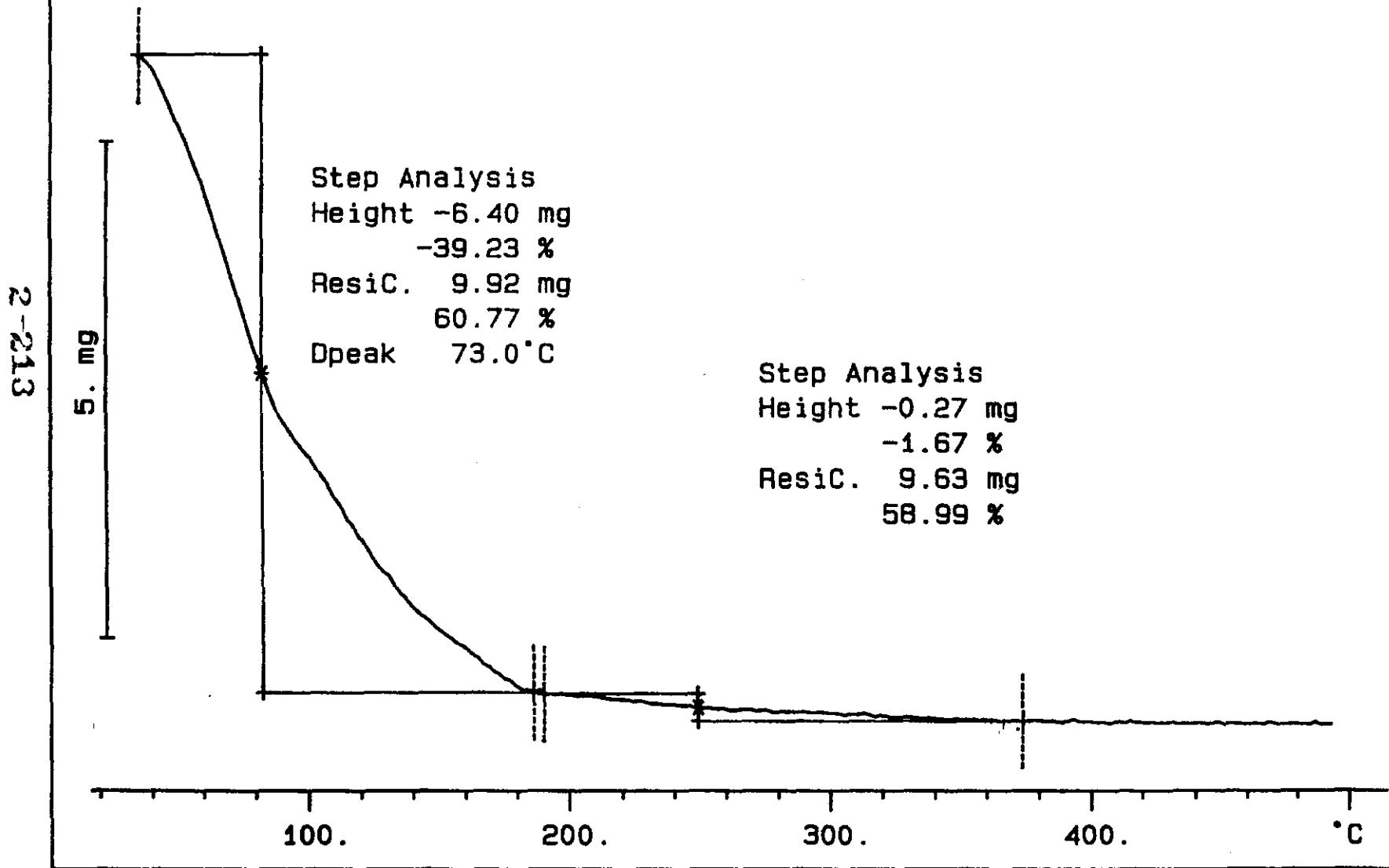
S96T001057DUP N2

16.320 mg

Rate: 10.0 °C/min

File: 00054.001 TG METTLER 16-Apr-96

Ident: 0.0 222-S Laboratory



S96T001058 N2

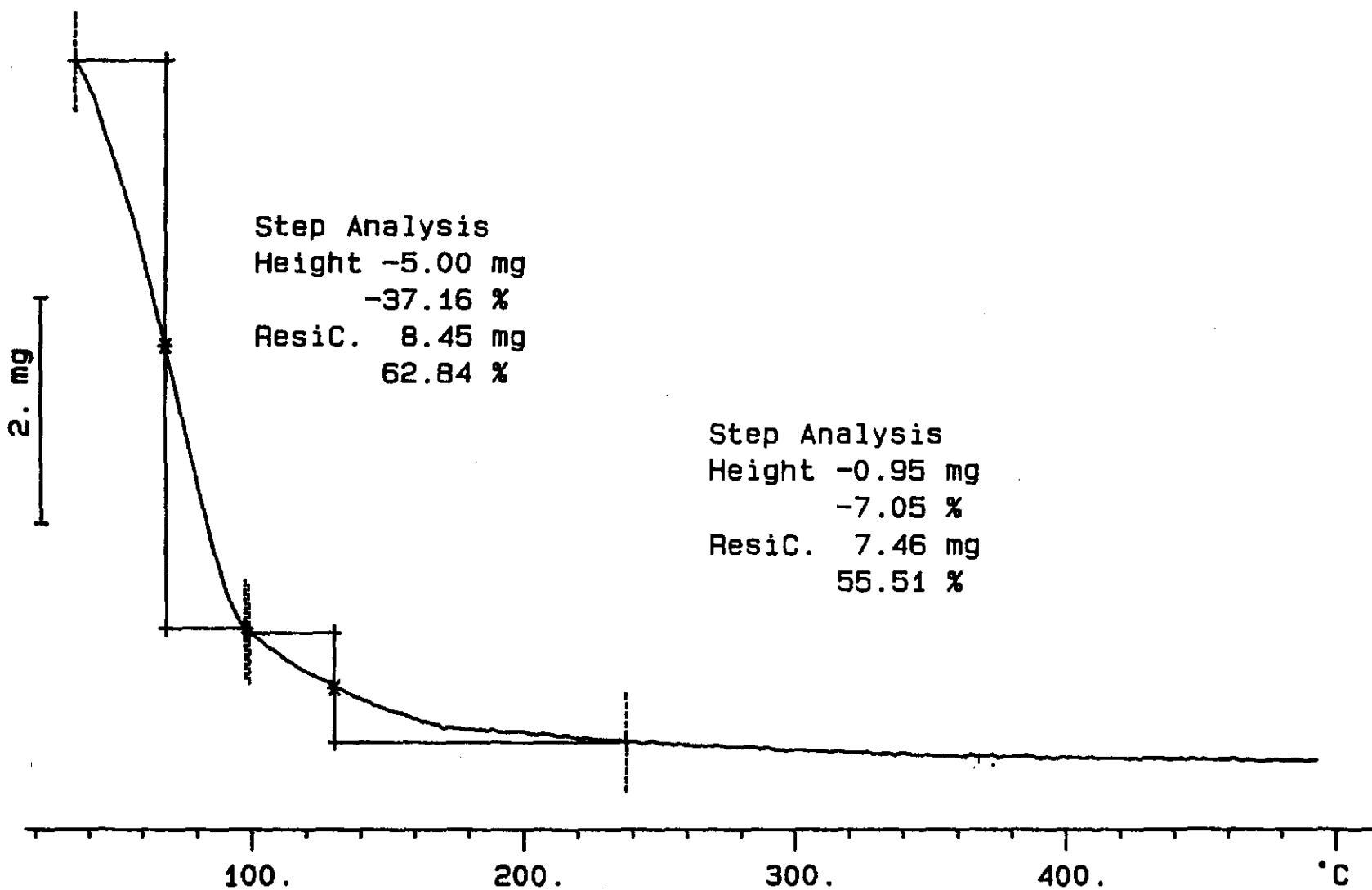
13.445 mg

Rate: 10.0 °C/min

File: 00056.001 TG METTLER 16-Apr-96

Ident: 0.0 222-S Laboratory

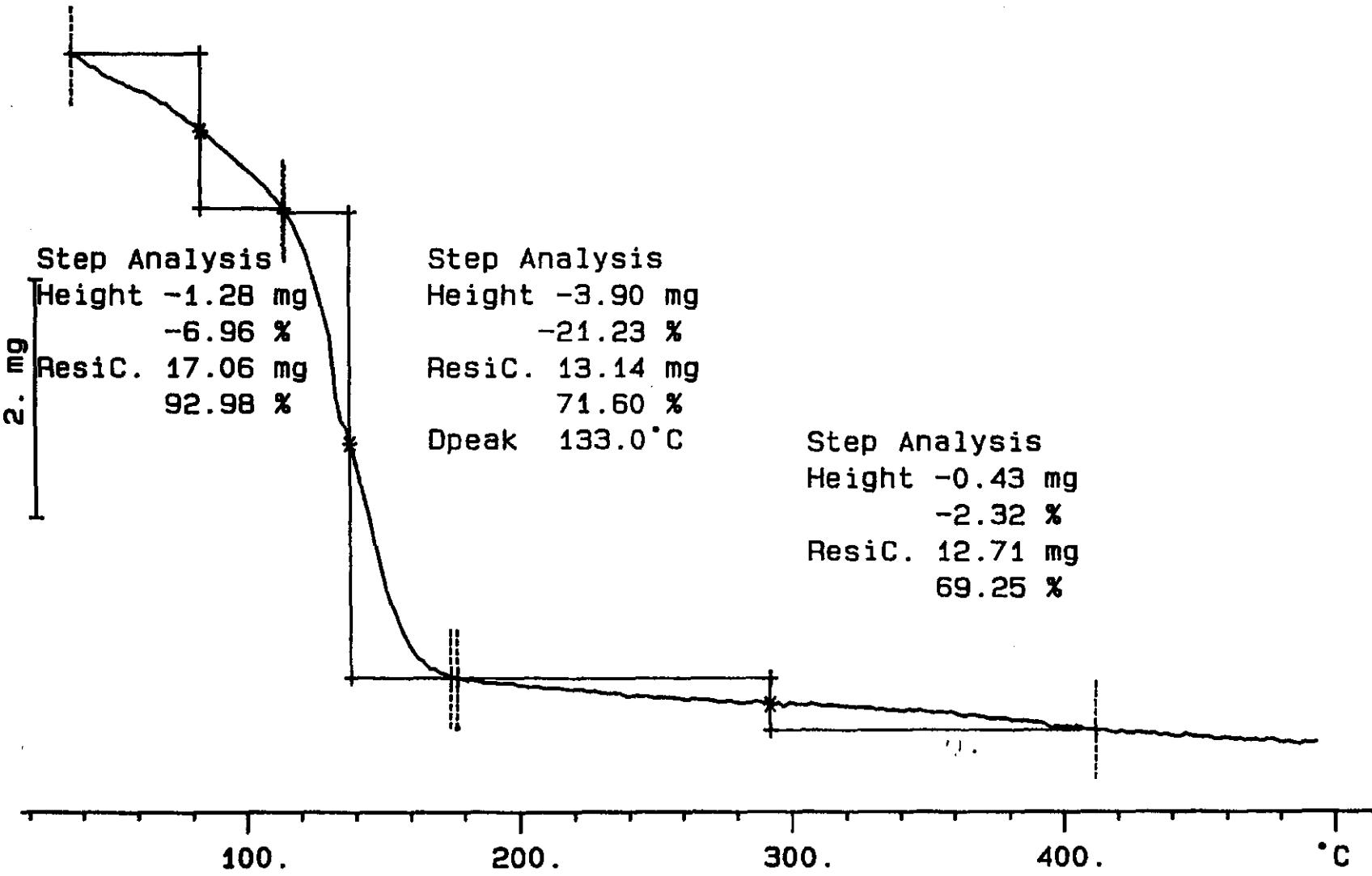
2-214



S96T001058DUP N2

18.346 mg

Rate: 10.0 °C/min

File: 00058.001 TG METTLER 17-Apr-96
Ident: 0.0 222-S Laboratory

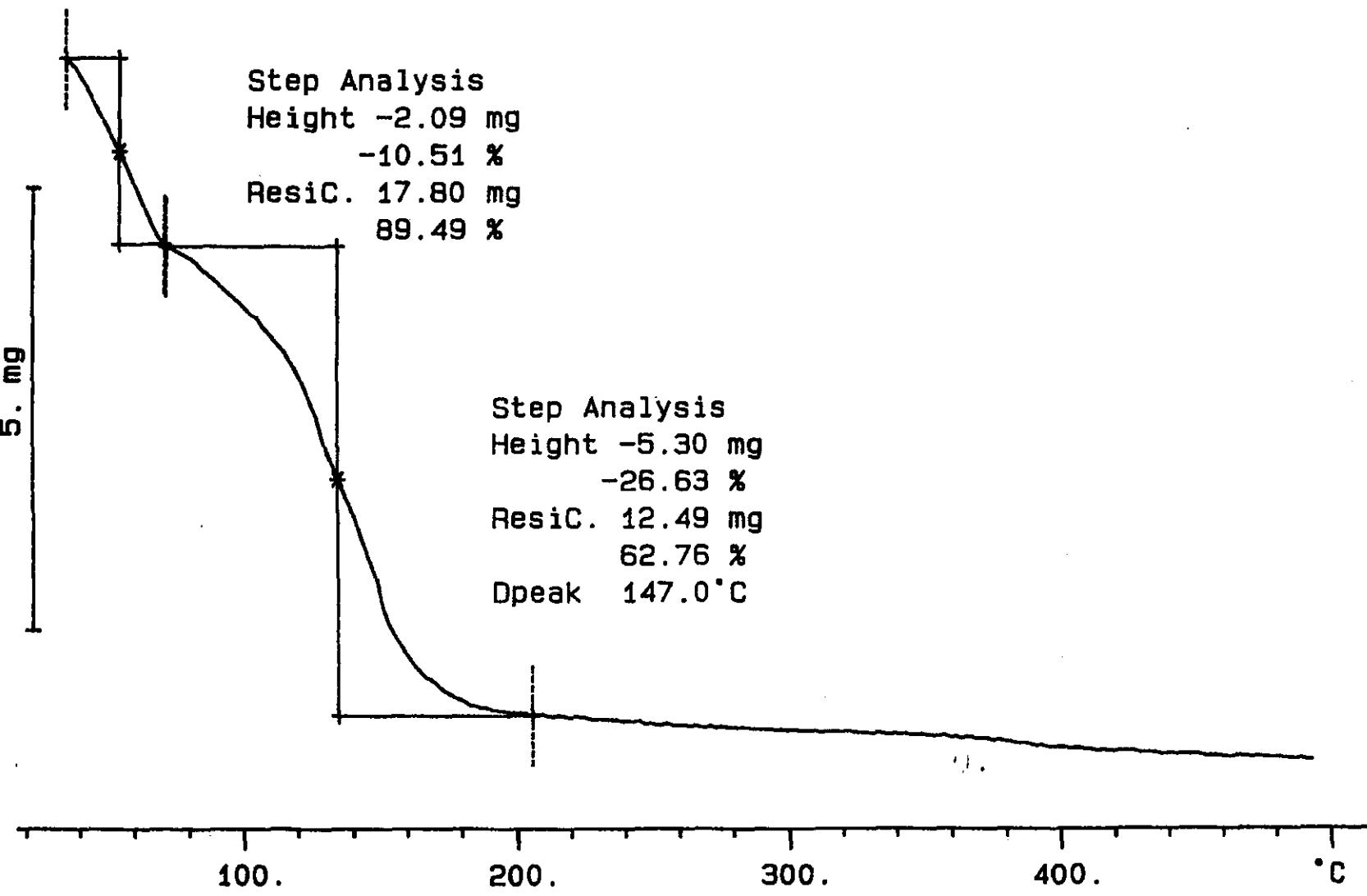
S96T001058 TRP N2

19.894 mg

Rate: 10.0 °C/min

File: 00060.001 TG METTLER 17-Apr-96

Ident: 0.0 222-S Laboratory



LABCORE Data Entry Template for Worklist#

6501

Analyst: SMF Instrument: TGA0 1 Book # 75 N8-AMethod: LA-560-112 Rev/Mod B-1

Worklist Comment: U-107 TGA RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.2</u>	<u>60.62</u>	<u>N/A</u>	%
96000126	U-107	2 SAMPLE	S96T001064	0	TGA-01	SOLID	<u>N/A</u>	<u>23.61</u>		%
96000126	U-107	3 DUP	S96T001064	0	TGA-01	SOLID	<u>23.61</u>	<u>22.76</u>	<u>N/A</u>	%
96000126	U-107	4 SAMPLE	S96T001065	0	TGA-01	SOLID	<u>N/A</u>	<u>27.64</u>	<u>3/21/96 80%</u>	%
96000126	U-107	5 DUP	S96T001065	0	TGA-01	SOLID	<u>27.64</u>	<u>27.64</u>	<u>N/A</u>	%

Final page for worklist # 6501Susie M. Dalton 3-18-96
Analyst Signature Date 1500efslak 3/22/96
Analyst Signature Date

Verified by Heather Anastas 3-25-96

Data Entry Comments: S95T001065 results are the sum of three weight loss steps.

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2018 TO 2022

TGA STD 75N8A

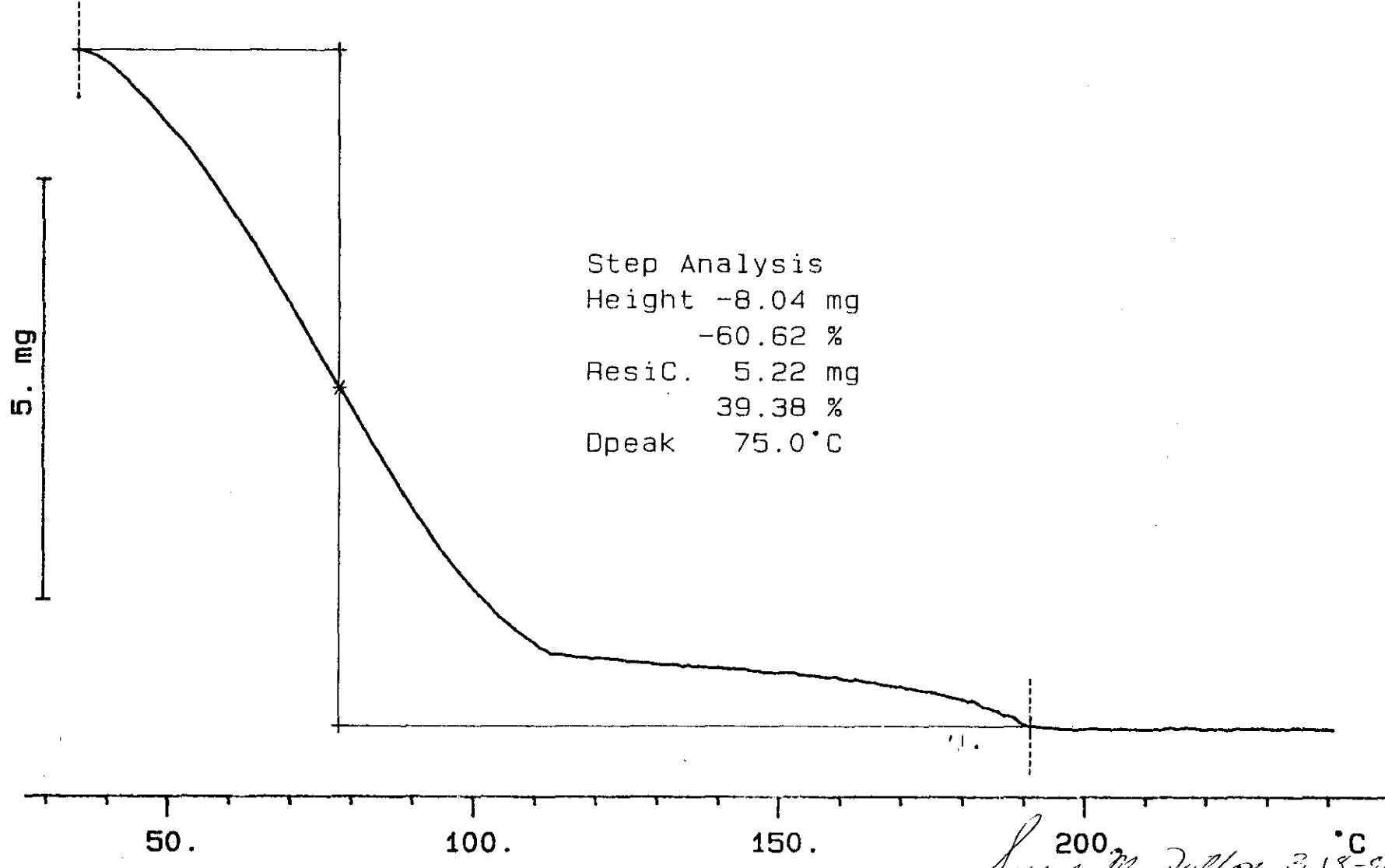
13.258 mg

Rate: 10.0 °C/min

File: 00027.001 TG METTLER 18-Mar-96

Ident: 0.0 222-S Laboratory

2-213



WHC-SD-WM-DP-184, REV. 1

S96T001064 N2

26.801 mg

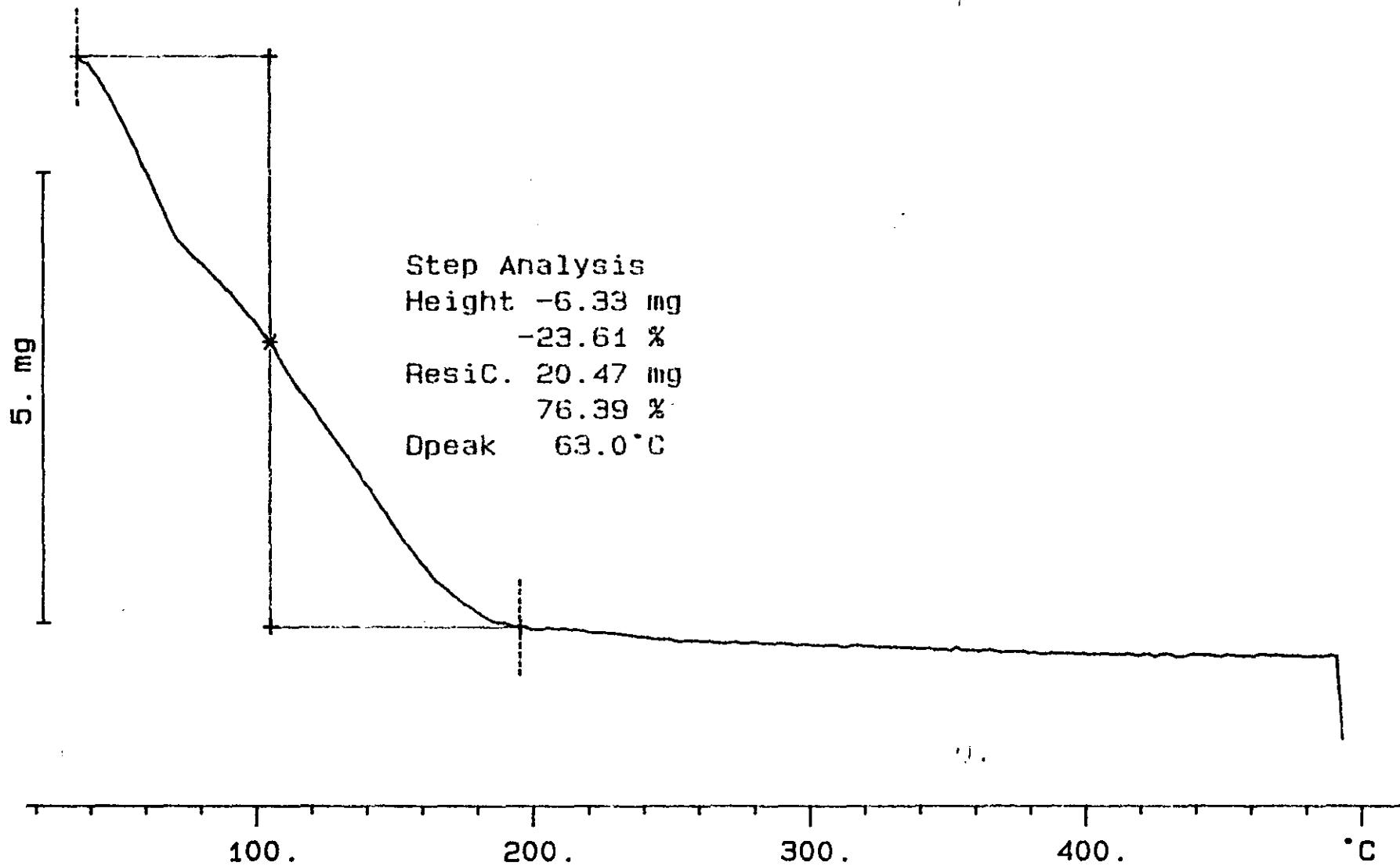
Rate: 10.0 °C/min

File: 00029.001 TG METTLER 18-Mar-96

Ident: 0.0 222-S Laboratory

Step Analysis
Height -6.33 mg
-23.61 %
ResiC. 20.47 mg
76.39 %
Dpeak 63.0 °C

2.219

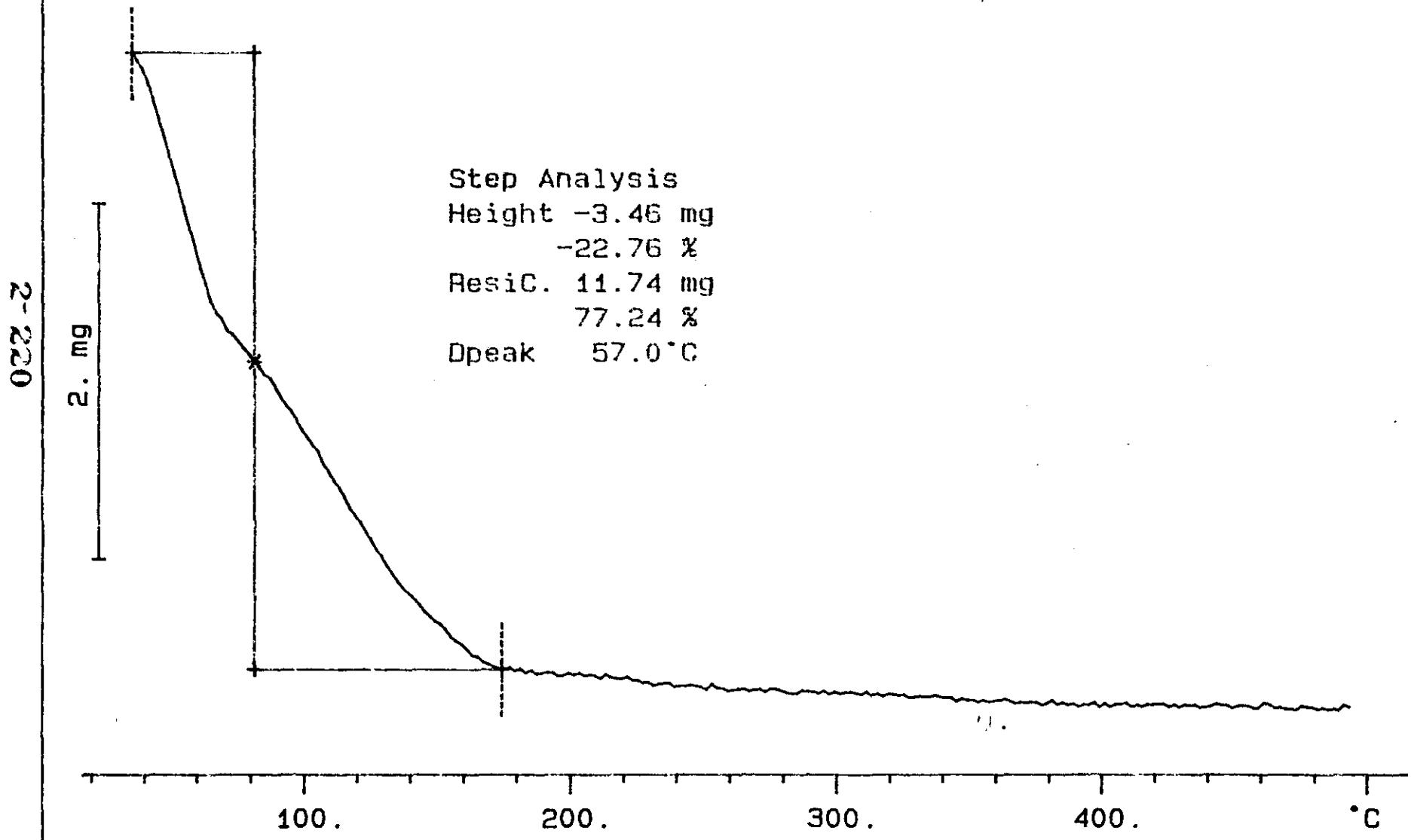


S96T001064 DUP N2
15.201 mg

Rate: 10.0 °C/min

File: 00031.001 TG METTLER 18-Mar-96
Ident: 0.0 222-S Laboratory

Step Analysis
Height -3.46 mg
-22.76 %
ResiC. 11.74 mg
77.24 %
Dpeak 57.0 °C



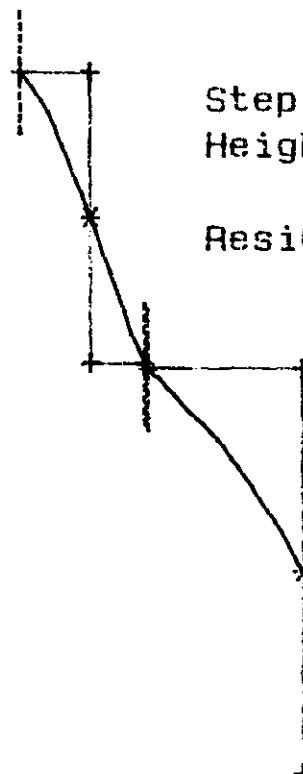
S96T001065 N2

17.027 mg

Rate: 10.0 °C/min

File: 00033.001 TG METTLER 18-Mar-96

Ident: 0.0 222-S Laboratory



Step Analysis

Height -1.72 mg

-10.11 %

ResiC. 15.31 mg

89.89 %

Step Analysis

Height -2.40 mg

-14.11 %

ResiC. 12.87 mg

75.61 %

Step Analysis

Height -0.75 mg

-4.43 %

ResiC. 12.12 mg

71.18 %

Dpeak 179.0 °C

S96T001065 DUP N2

26.154 mg

Rate: 10.0 °C/min

File: 00035.001 TG METTLER 18-Mar-96

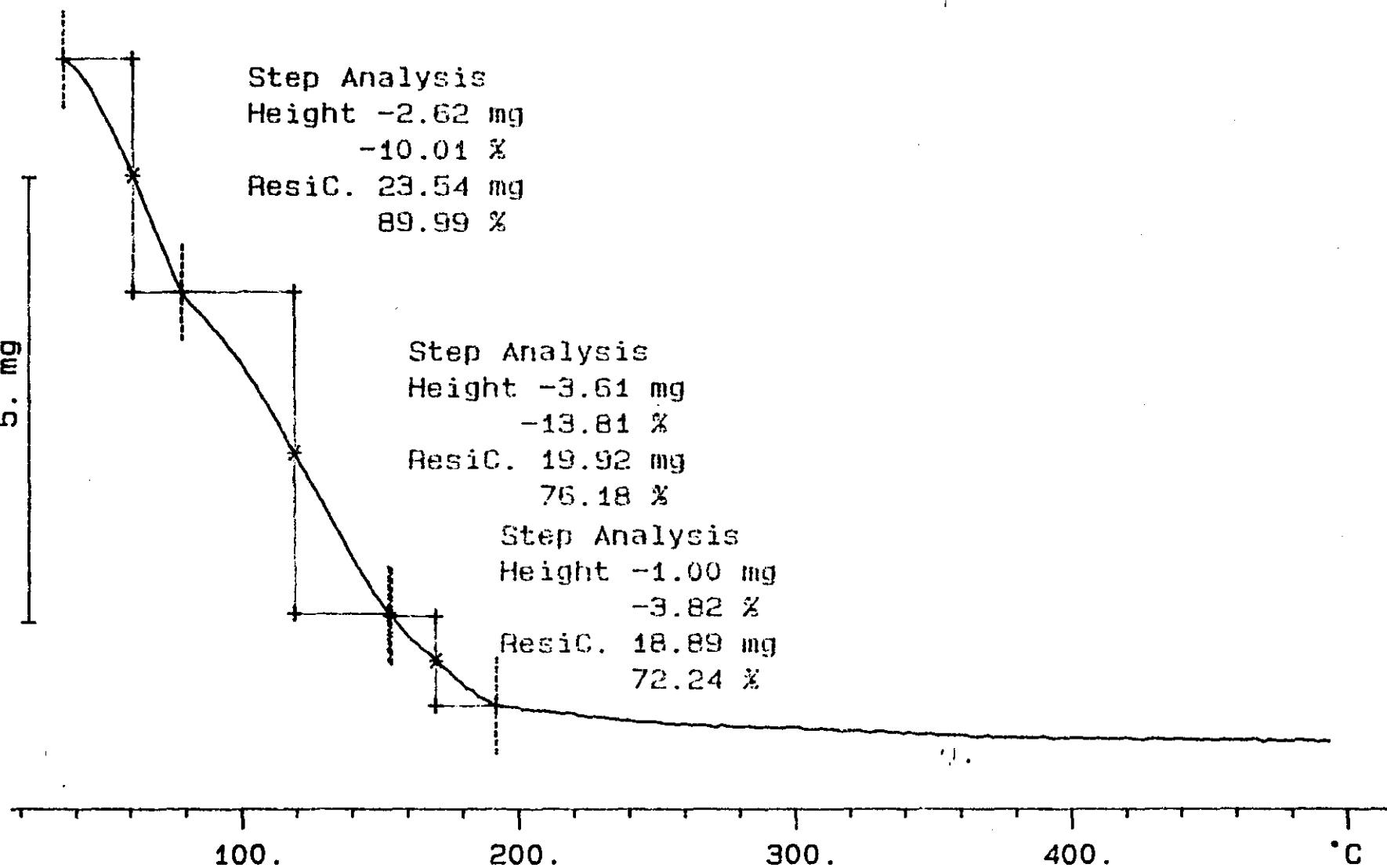
Ident: 0.0 222-S Laboratory

Step Analysis
Height -2.62 mg
-10.01 %
ResiC. 23.54 mg
89.99 %

Step Analysis
Height -3.61 mg
-13.81 %
ResiC. 19.92 mg
76.18 %

Step Analysis
Height -1.00 mg
-3.82 %
ResiC. 18.89 mg
72.24 %

2-222



worklistrpt Version 2.1 05/15/95

04/23/96 09:48

Page. 1

LABCORE Data Entry Template for Worklist#**6502**Analyst: SMF Instrument: TGA0 3 Book # 82N8AMethod: LA-514-114 Rev/Mod C-1

Worklist Comment: U-107 TGA RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		TGA-03	SOLID	<u>59.2</u>	<u>59.16</u>	<u>N/A</u>	%
96000126	U-107	2 SAMPLE	S96T001068 0	TGA-03	SOLID	<u>N/A</u>	<u>38.28</u>		%
96000126	U-107	3 DUP	S96T001068 0	TGA-03	SOLID	<u>38.28</u>	<u>43.35</u>	<u>N/A</u>	%
		4 STD		TGA-03	SOLID	<u>59.2</u>	<u>58.85</u>	<u>N/A</u>	%
96000085	U-107	5 SAMPLE	S96T001143 0	TGA-03	SOLID	<u>N/A</u>	<u>4.9b</u>		%
96000085	U-107	6 DUP	S96T001143 0	TGA-03	SOLID	<u>4.9b</u>	<u>6.3b</u>	<u>N/A</u>	%
96000085	U-107	7 TRIP	S96T001143 0	TGA-03	SOLID	<u>4.9b</u>	<u>7.87</u>	<u>N/A</u>	%

Final page for worklist # 6502See Attached for Signatures.

Analyst Signature Date

New weight 4/24/96

Analyst Signature Date

S96T001068 results are the sum of two
weight loss steps (9.57 + 28.71%).

Verified by H Anasto 4-24-96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

2-223

WHC-SD-WM-DP-184, REV. 1

worklist Version 2.1 05/15/95
03/14/96 13:34

Page: 1

LABCORE Data Entry Template for Worklist#

6502Analyst: SMF Instrument: TGA0 Book # 82N/8A

Method: LA-560-112 Rev/Mod

Worklist Comment: U-107 TGA RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID		N/A	%
96000126	U-107	2 SAMPLE	S96T001068 0		TGA-01	SOLID	N/A		%
96000126	U-107	3 DUP	S96T001068 0		TGA-01	SOLID		N/A	%
96000085	U-107	4-SAMPLE	S96T001143 0		TGA-01	SOLID	N/A		%
96000085	U-107	5 DUP	S96T001143 0		TGA-01	SOLID		N/A	%

Final page for worklist # 6502Susie M. Dulson 4-17-96

Analyst Signature

Date

Analyst Signature

Date

RS McCown 4/17/96

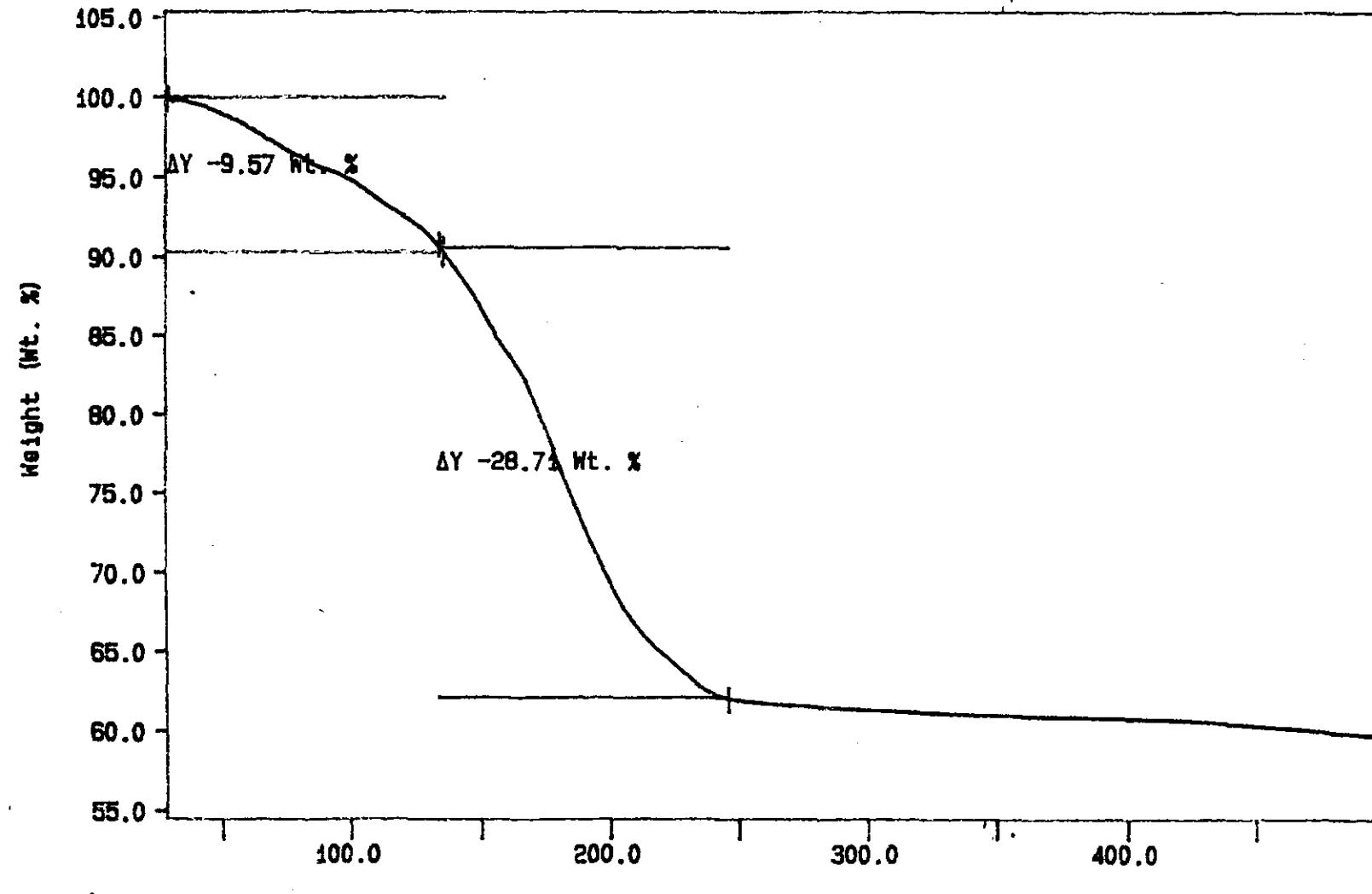
Other instrument was Used.

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Curve 1: TGA
File info: SAM041701 Wed Apr 17 07:52:09 1996
Sample Weight: 30.536 mg
S96T001068

2-225



10C/MIN N2
TEMP: 806.8 °C TIME: 0.0 min RATES: 10.0 °C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Apr 17 08:40:33 1996

04/23/96

10:05 04/23/96

WESTINGHOUSE

→→ MO-924 200W

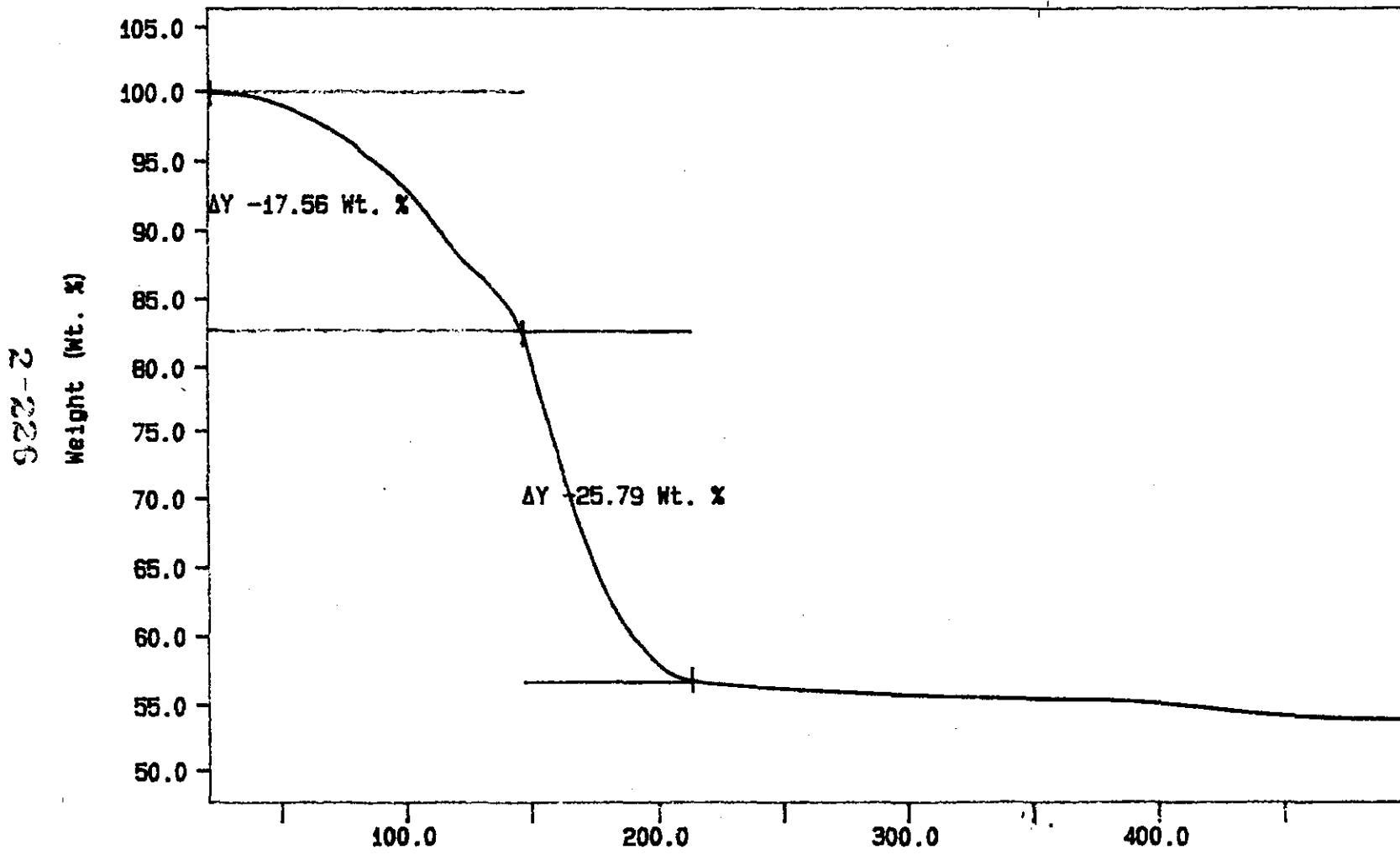
011

Curve 1: TGA

File info: SAM041702 Wed Apr 17 09:32:26 1996

Sample Weight: 19.384 mg

S96T001068 DUP



10C/MIN N2
TEMP: 35.0 °C TIME: 0.0 min RATE: 10.0 °C/min
TEMP: 500.0 °C

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Apr 17 09:40:08 1996

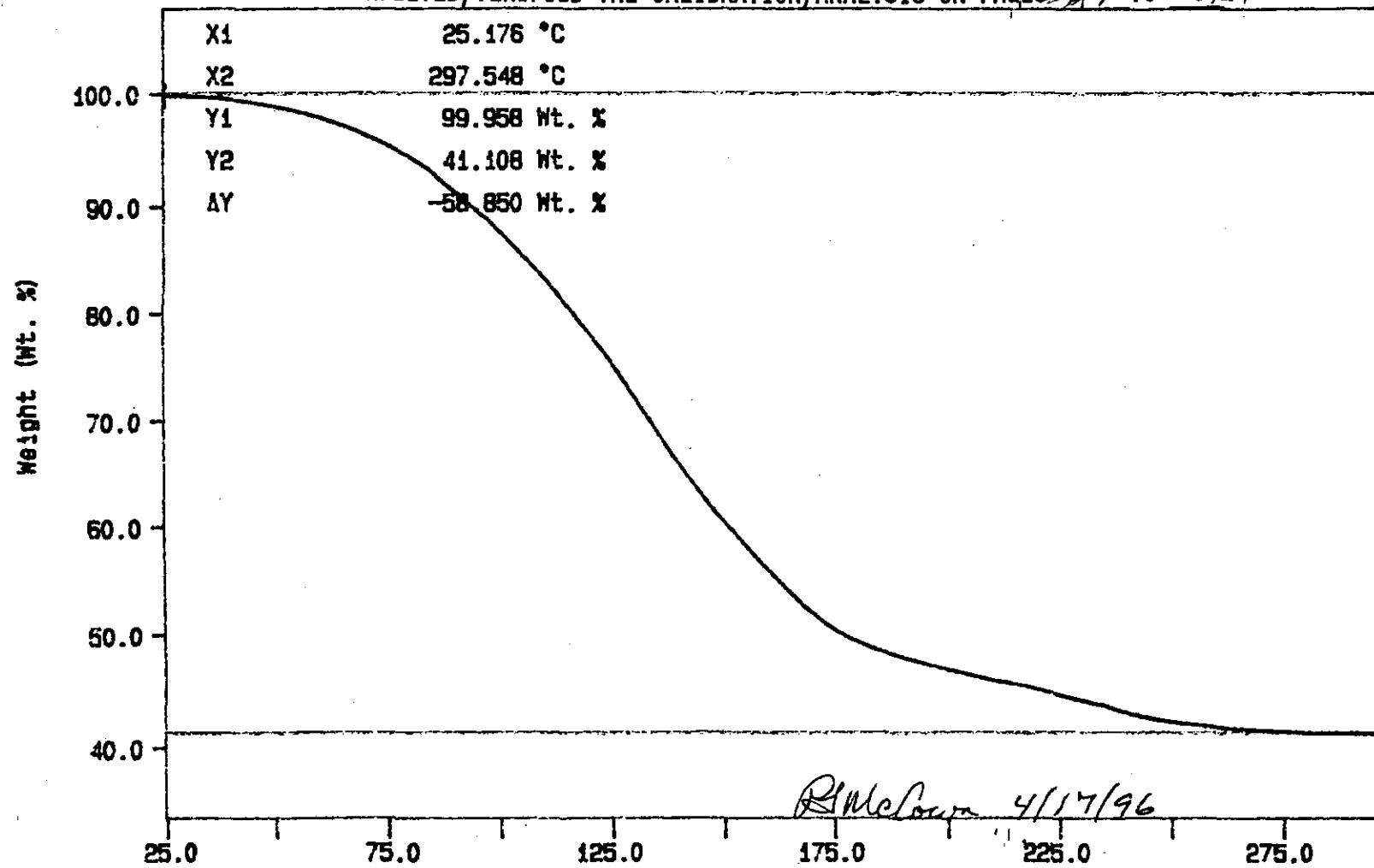
Curve 1: TGA

File info: TER041705 Wed Apr 17 18:57:56 1996

Sample Weight: 20.559 mg

TGA STD 82NB-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 281 TO 283



N2 10C/MIN
TOPP: 25.0 °C TIMES: 0.0 min RATE: 10.0 °C/min
TOPP: 300.0 °C

Temperature (°C)

PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Apr 17 19:01:02 1996

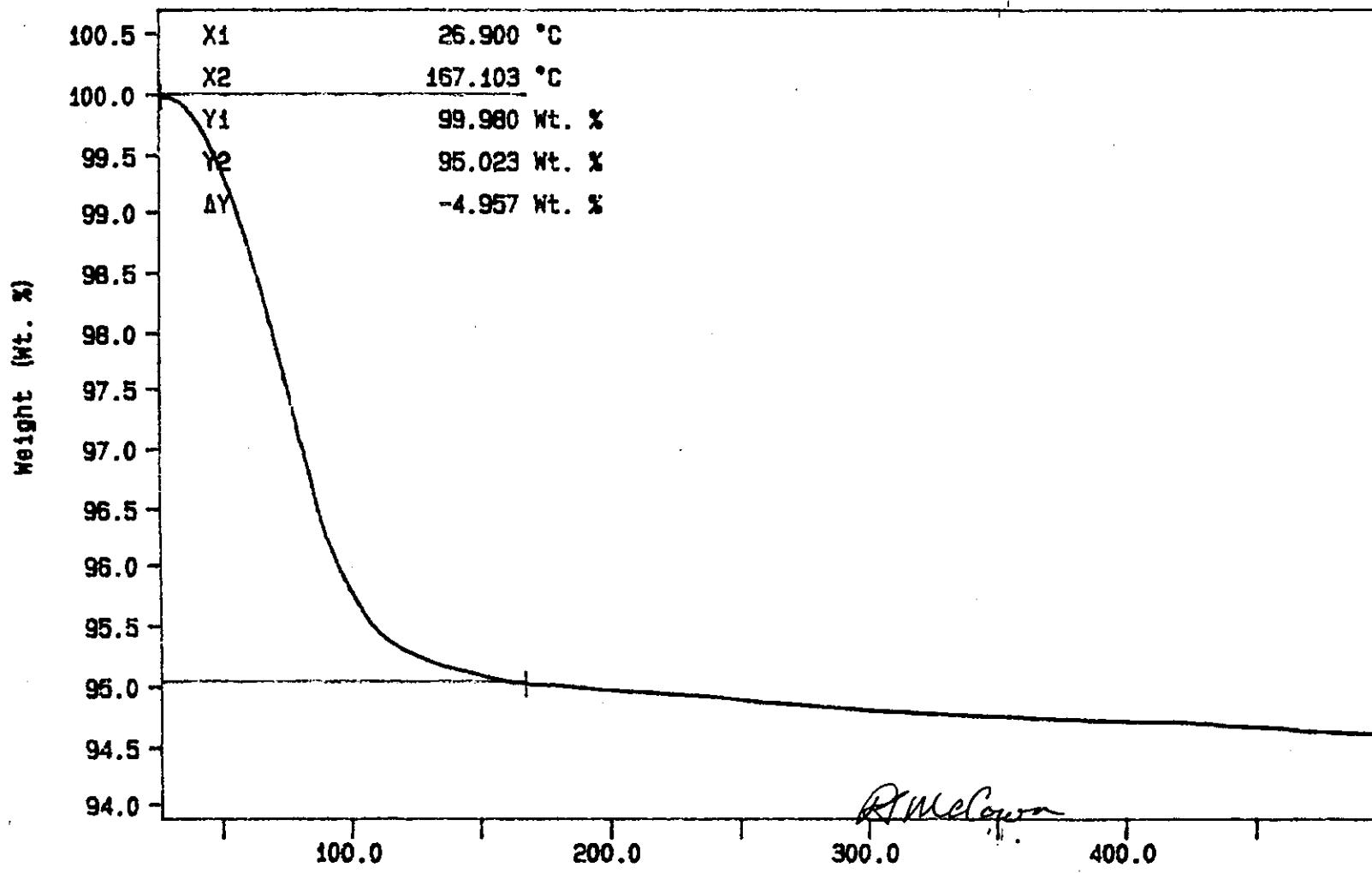
Curve 1: TGA

File info: SAM041703 Wed Apr 17 20:09:24 1996

Sample Weight: 15.606 mg

S96T001143 SAM

2-228



10C/MIN N2
TEMP: 300.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Apr 17 20:29:28 1996

04/23/96 10:07

WESTINGHOUSE

→→ MO-924 200W

Q014

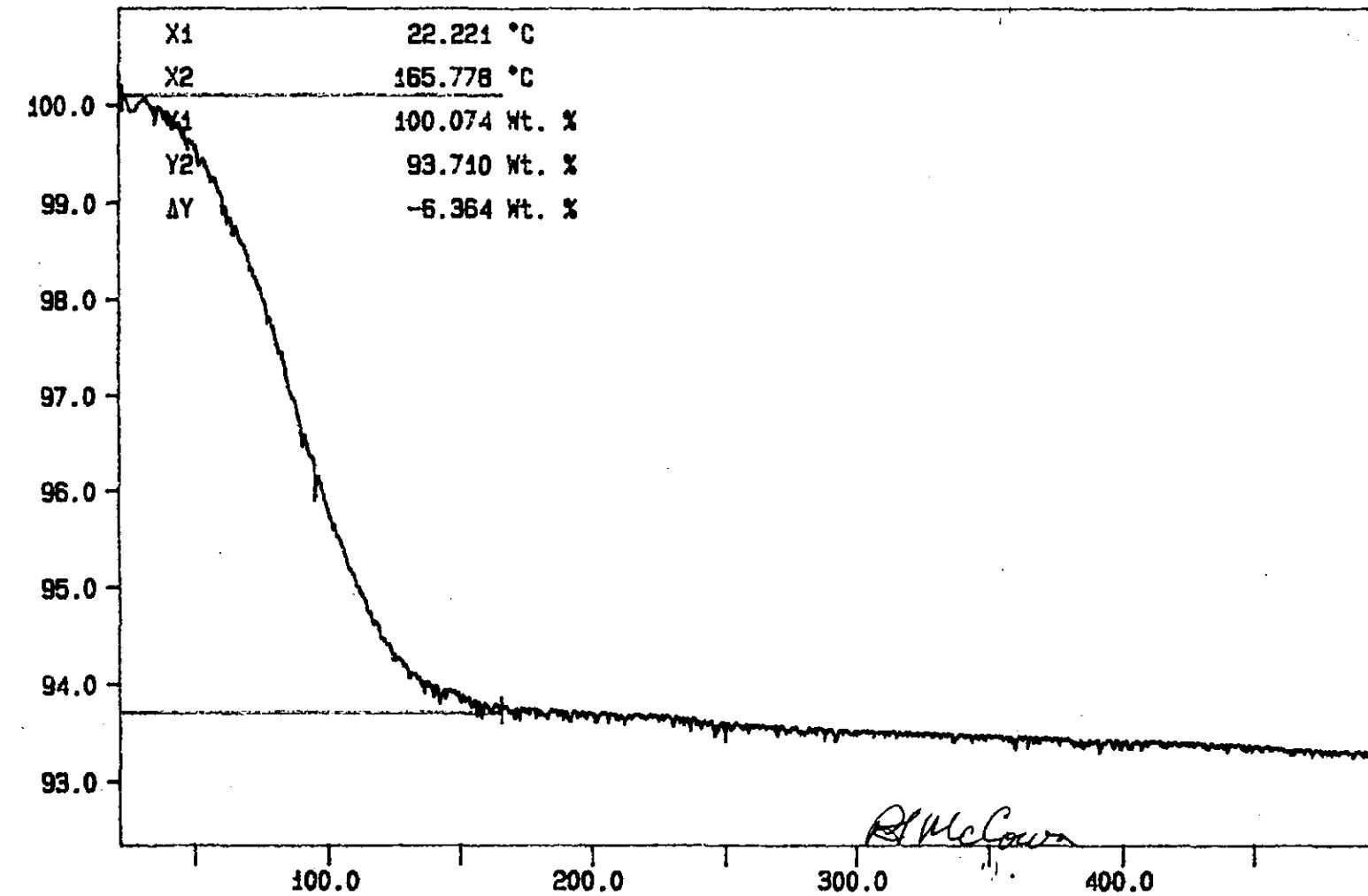
Curve 1: TGA

File info: SAM041704 Wed Apr 17 21:41:51 1996

Sample Weight: 19.944 mg

S96T001143 DUP

2-229



10C/MIN N2

TEMP1: 25.0 °C TIME1: 0.0 min RATE1: 10.0 °C/min

Temperature (°C)

PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Apr 17 21:42:28 1996

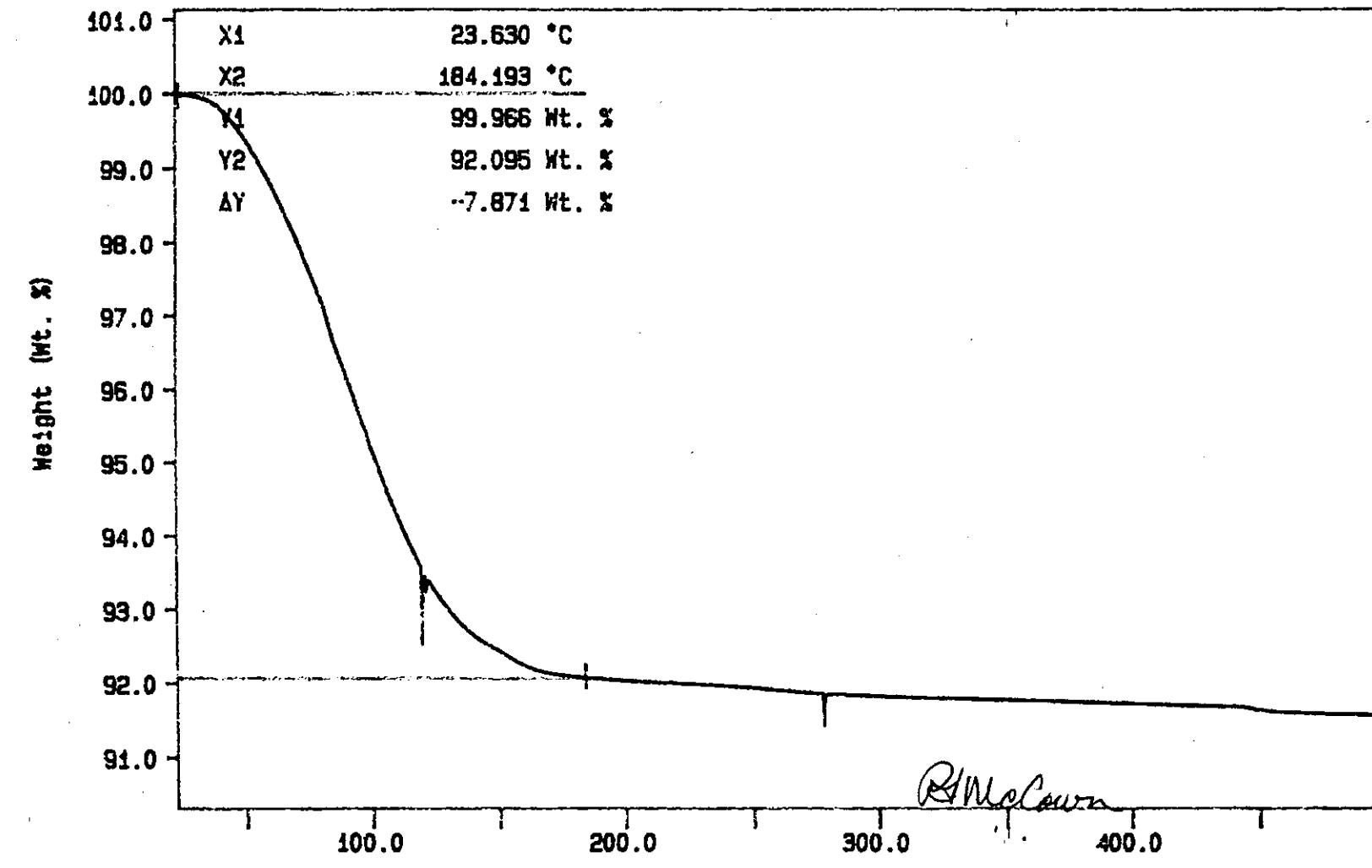
Curve 1: TGA

File info: SAM041705 Wed Apr 17 22:58:09 1996

Sample Weight: 20.775 mg

S96T001149 TRIP

2-230



10C/MIN N2
TEMP: 30.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Apr 17 22:58:19 1996

LABCORE Data Entry Template for Worklist#

6633

Analyst: SIMF Instrument: TGA0 1 Book # 82 N 817Method: LA-560-112 Rev/Mod B-1

Worklist Comment: U-107 FOR TGA (RUN UNDER N2) RTS

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		TGA-01	LIQUID	59.2	58.97	N/A	%
96000085	U-107	2 SAMPLE	S96T000665	0	TGA-01	N/A	51.94		%
96000085	U-107	3 DUP	S96T000665	0	TGA-01	51.94	54.51	N/A	%
96000085	U-107	4 SAMPLE	S96T000682	0	TGA-01	N/A	49.79		%
96000085	U-107	5 DUP	S96T000682	0	TGA-01	49.79	49.55	N/A	%

Final page for worklist # 6633Susie M. Fulton 4/17/96
Analyst Signature DateL. Jones 4-18-96
Analyst Signature DateVerified by Hanastos
4-22-96

Data Entry Comments: S96T000665 results are the sum of two weight loss steps.

S96T000682 results are the sum of two weight loss steps

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

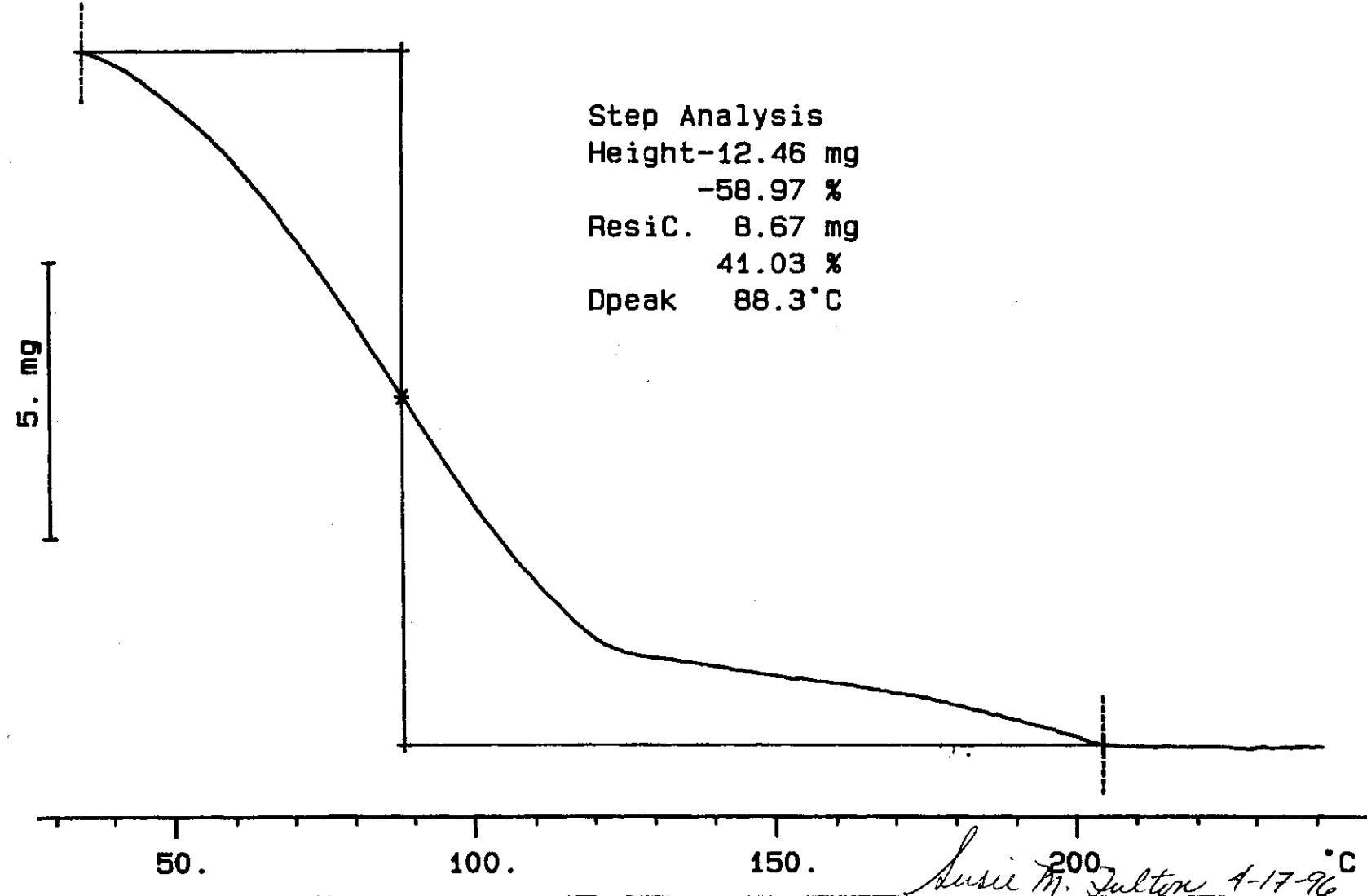
2-232

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2-232 TO 2-256

TGA STD 82N8A

21.137 mg

Rate: 10.0 °C/min

File: 00062.001 TG METTLER 17-Apr-96
Ident: 0.0 222-S Laboratory

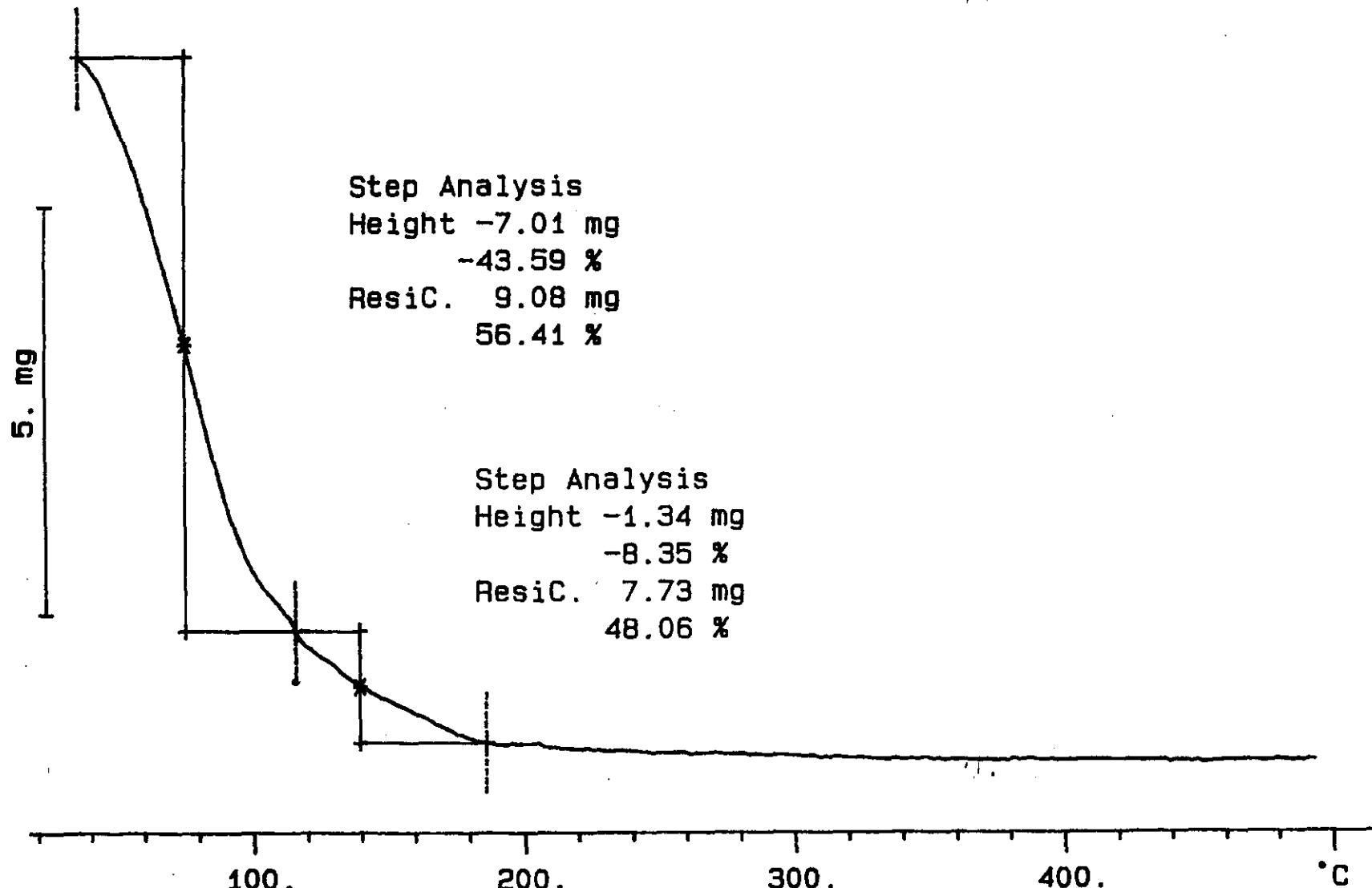
S96T000665 N2

16.088 mg

Rate: 10.0 °C/min

File: 00064.001 TG METTLER 17-Apr-96

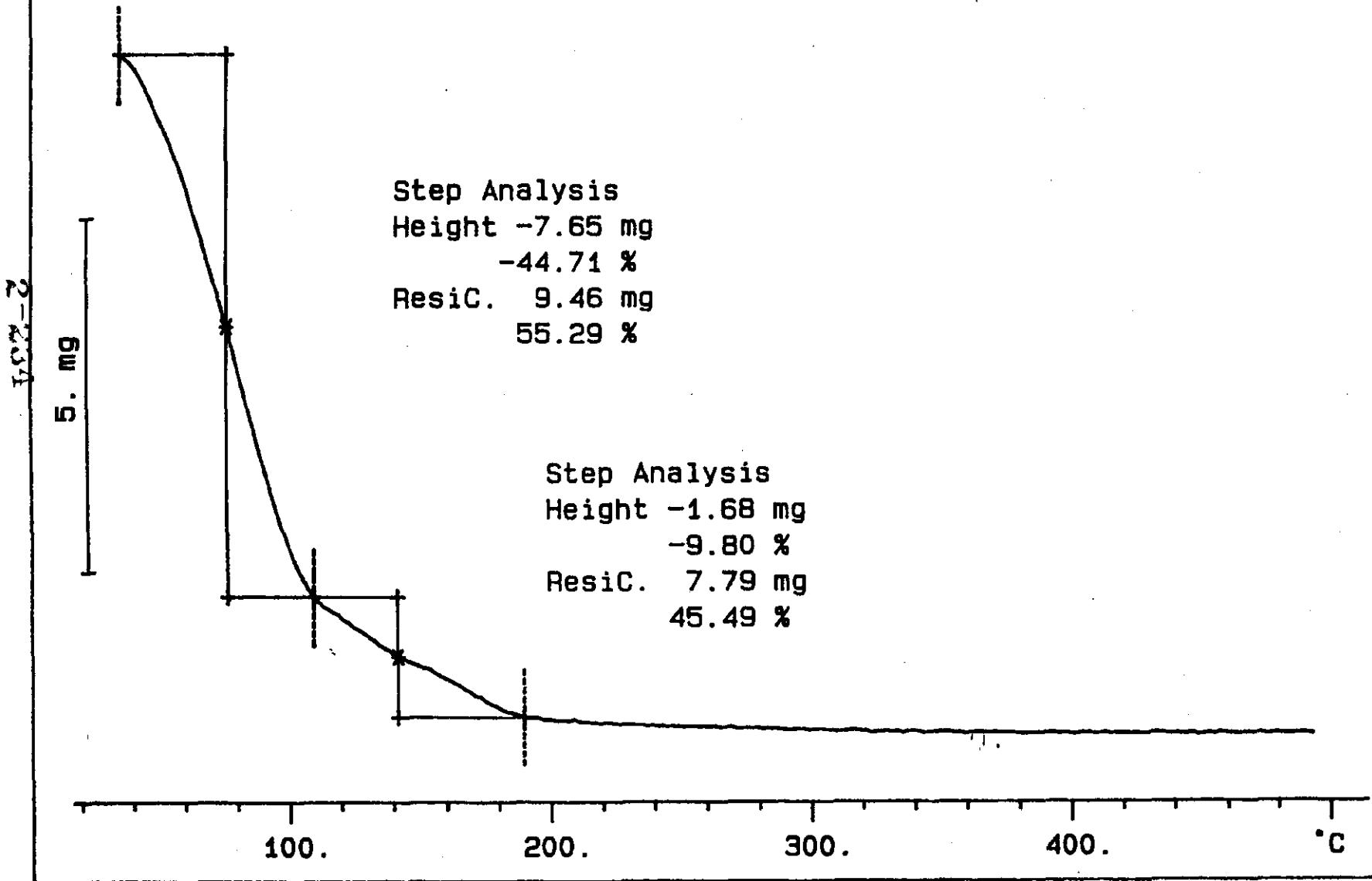
Ident: 0.0 222-S Laboratory



S96T000665 DUP N2
17.116 mg

Rate: 10.0 °C/min

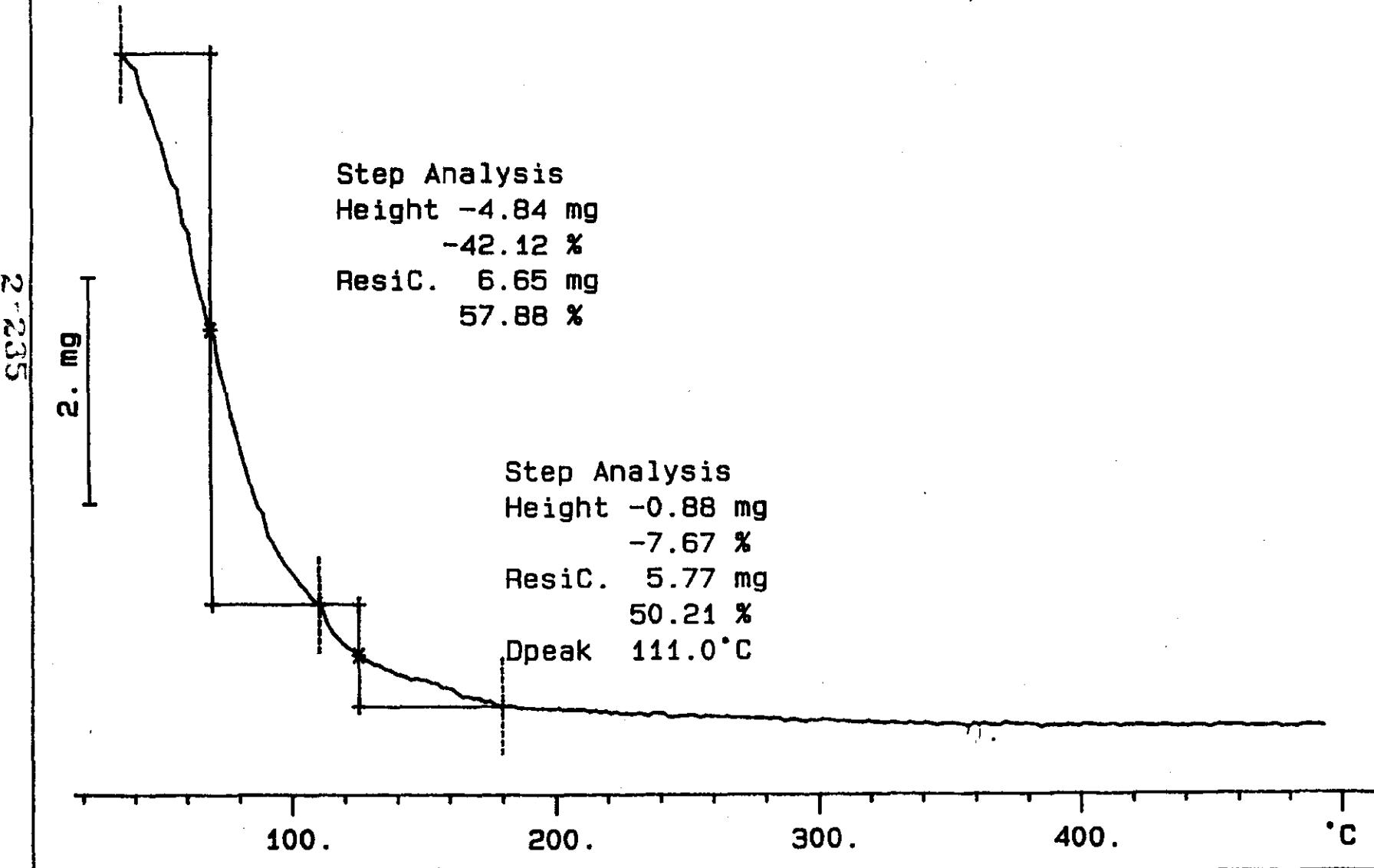
File: 00066.001 TG METTLER 17-Apr-96
Ident: 0.0 222-S Laboratory



S96T000682 N2

11.492 mg

Rate: 10.0 °C/min

File: 00068.001 TG METTLER 17-Apr-96
Ident: 0.0 222-S Laboratory

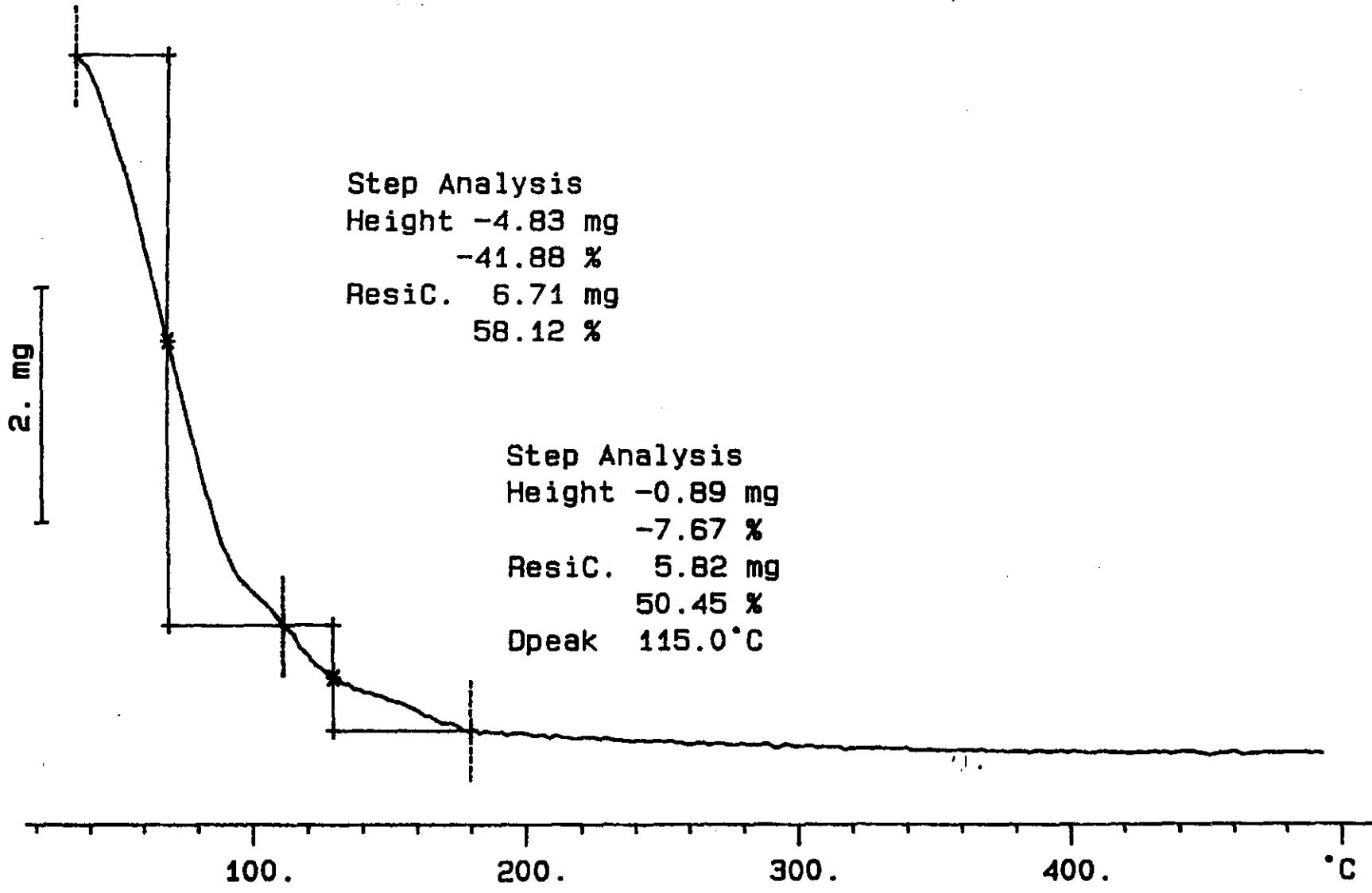
S96T000682 DUP N2

11.544 mg

Rate: 10.0 °C/min

File: 00070.001 TG METTLER 17-Apr-96

Ident: 0.0 222-S Laboratory



LABCORE Data Entry Template for Worklist#

6648

Analyst: RDM Instrument: TGA0 Book # 100CN2Method: LA-560-112 Rev/Mod B-1

Worklist Comment: U-107 FOR TGA (RUN UNDER N2) RTS!

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		TGA-01	SOLID	<u>59.4</u>	<u>61.71</u>	<u>N/A</u>	%
96000126	U-107	2 SAMPLE	S96T001059 0	TGA-01	SOLID	<u>N/A</u>	<u>21.25</u>		%
		3 STD		TGA-01	SOLID	<u>59.4</u>	<u>59.44</u>	<u>N/A</u>	%
96000126	U-107	4 DUP	S96T001059 0	TGA-01	SOLID	<u>21.25</u>	<u>21.26</u>	<u>N/A</u>	%
		5 STD		TGA-01	SOLID	<u>59.4</u>	<u>61.10</u>	<u>N/A</u>	%
96000126	U-107	6 SAMPLE	S96T001070 0	TGA-01	SOLID	<u>N/A</u>	<u>91.44</u>		%
96000126	U-107	7 DUP	S96T001070 0	TGA-01	SOLID	<u>91.44</u>	<u>91.02</u>	<u>N/A</u>	%

Final page for worklist # **6648**See Attached for Signatures

Analyst Signature Date

Jeanne Conk 4/11/96

Analyst Signature Date

Verified by Blandina Valenzuela 4/15/96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

worklist rpt Version 2.1 05/15/95

03/18/96 14:19

Page: 1

LABCORE Data Entry Template for Worklist#**6648**Analyst: RJM

Instrument: TGA0

Book # 100LN2Method: LA-560-112 Rev/Mod B-1

Worklist Comment: U-107 FOR TGA (RUN UNDER N2) RTS!

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.4</u>	<u>61.71</u>	<u>N/A</u> %
96000126	U-107	2 SAMPLE	S96T001059 0		TGA-01	SOLID	<u>N/A</u>	<u>21.25</u>	<u></u> %
96000126	U-107	3 DUP	S96T001059 0		TGA-01	SOLID	<u>21.25</u>	<u></u>	<u>N/A</u> %
96000126	U-107	4- SAMPLE	S96T001070 0		TGA-01	SOLID	<u>N/A</u>	<u></u>	<u></u> %
96000126	U-107	5 DUP	S96T001070 0		TGA-01	SOLID	<u></u>	<u></u>	<u>N/A</u> %

Final page for worklist #

6648RJM3/18/96

Date

Analyst Signature

Date

Analyst Signature

Data Entry Comments:

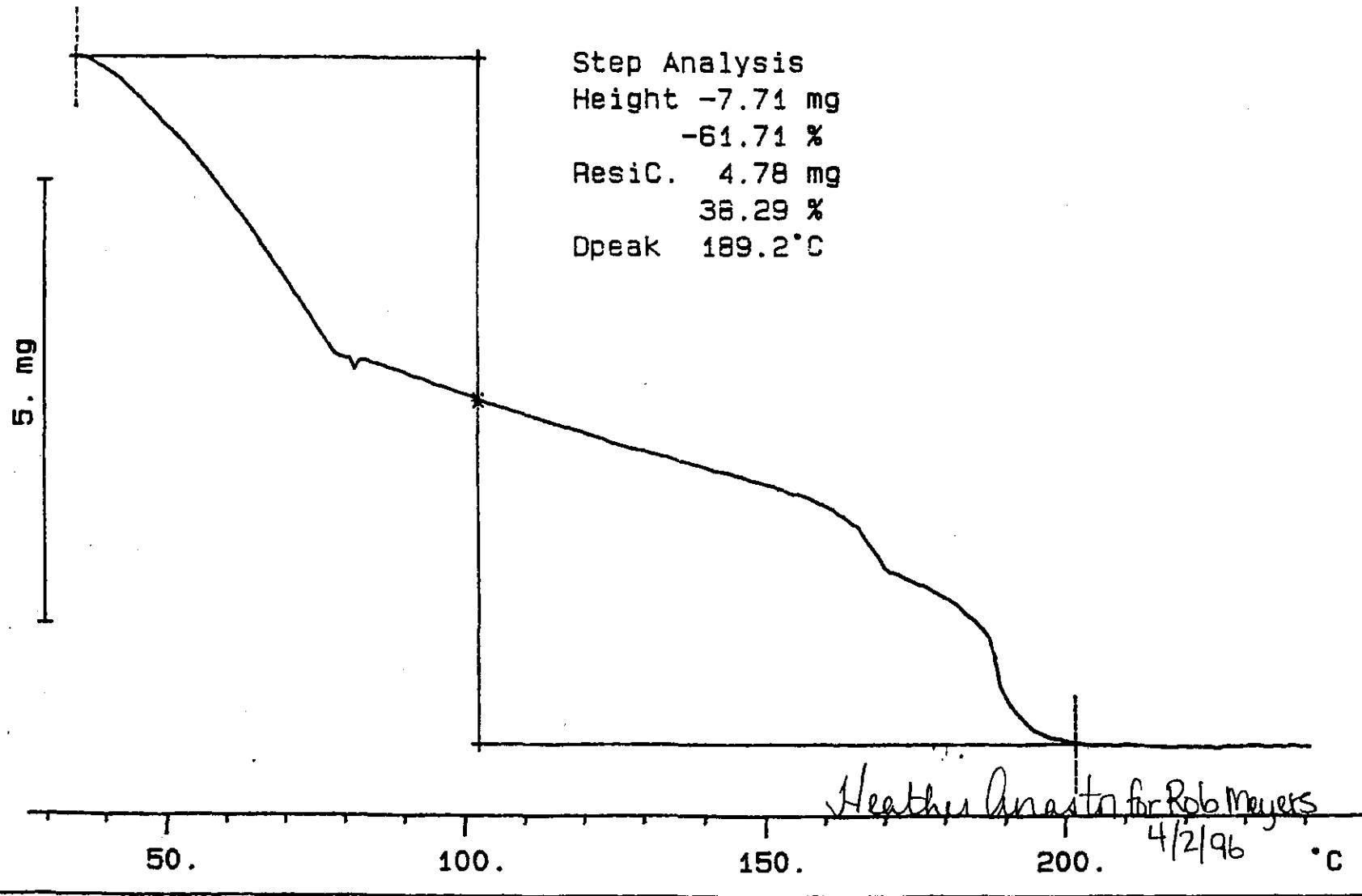
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2239 TO 2245

TGA STD 100CN2

12.493 mg

Rate: 10.0 °C/min

File: 00077.001 TG METTLER 29-Mar-96
Ident: 0.0 222-S Laboratory

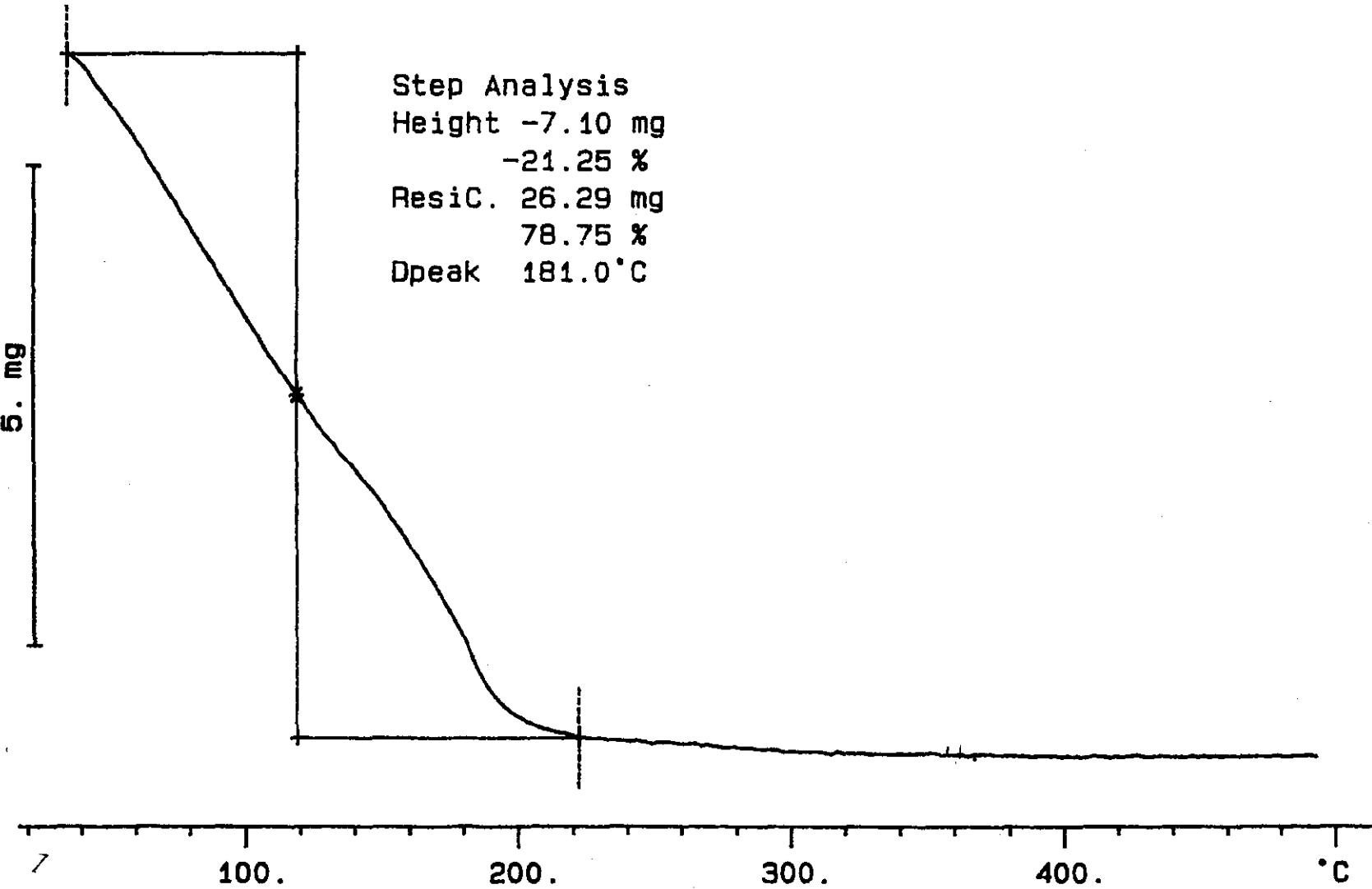
S96T001059 SAM N2

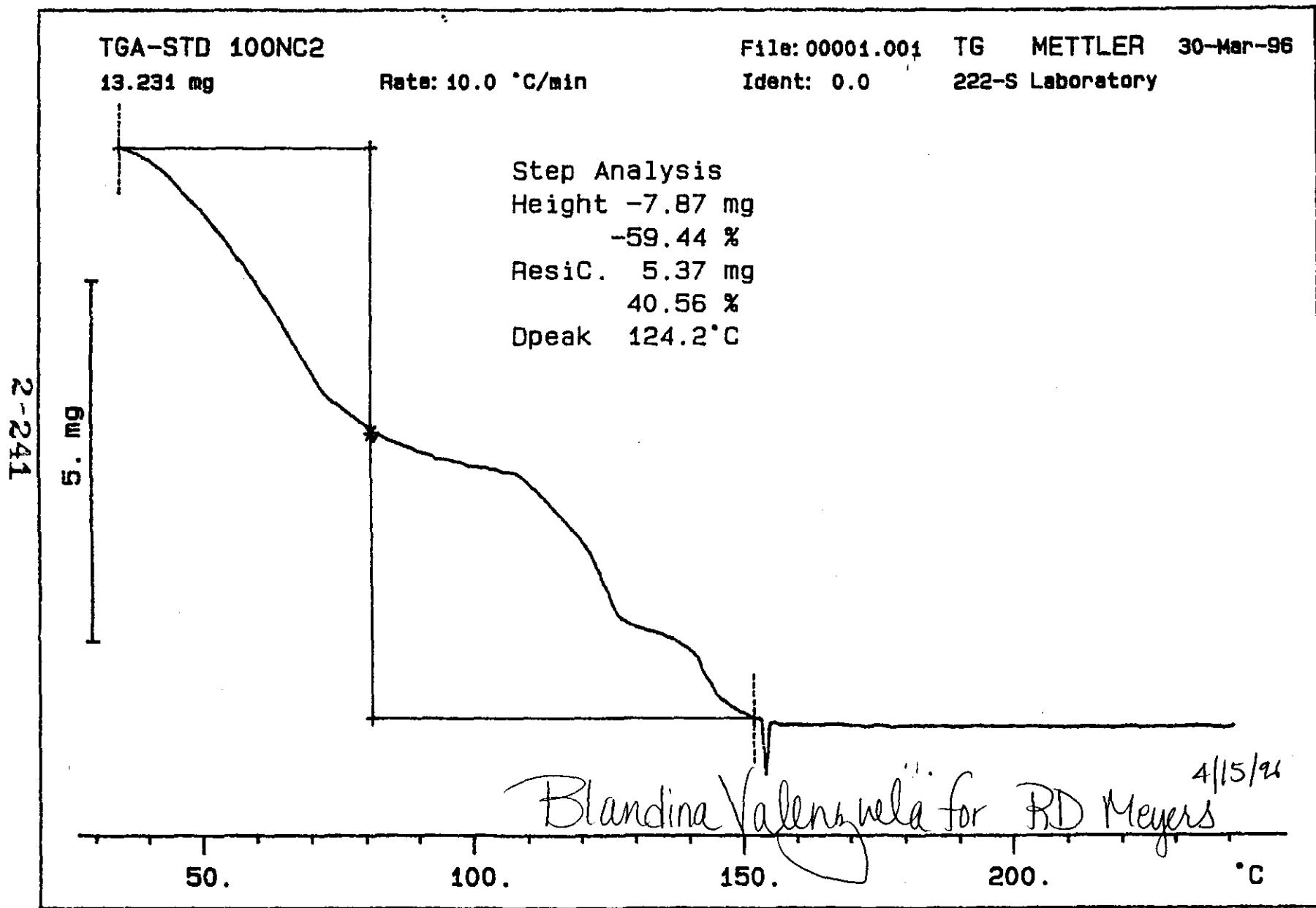
33.382 mg

Rate: 10.0 °C/min

File: 00081.001 TG METTLER 29-Mar-96
Ident: 0.0 222-S Laboratory

Step Analysis
Height -7.10 mg
-21.25 %
ResiC. 26.29 mg
78.75 %
Dpeak 181.0 °C





S96T001059 DUP N2

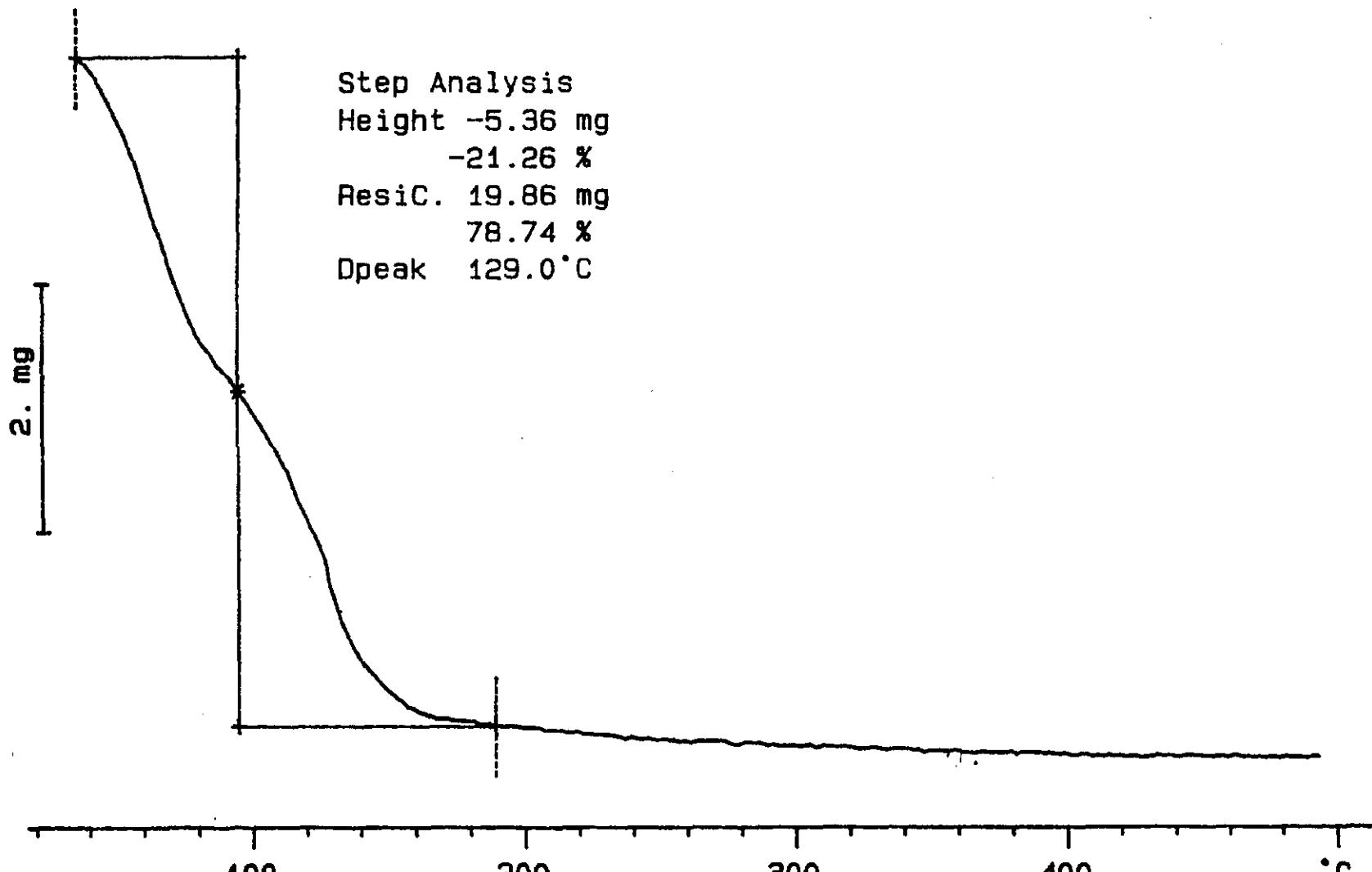
25.225 mg

Rate: 10.0 °C/min

File: 00003.001 TG METTLER 30-Mar-96

Ident: 0.0 222-S Laboratory

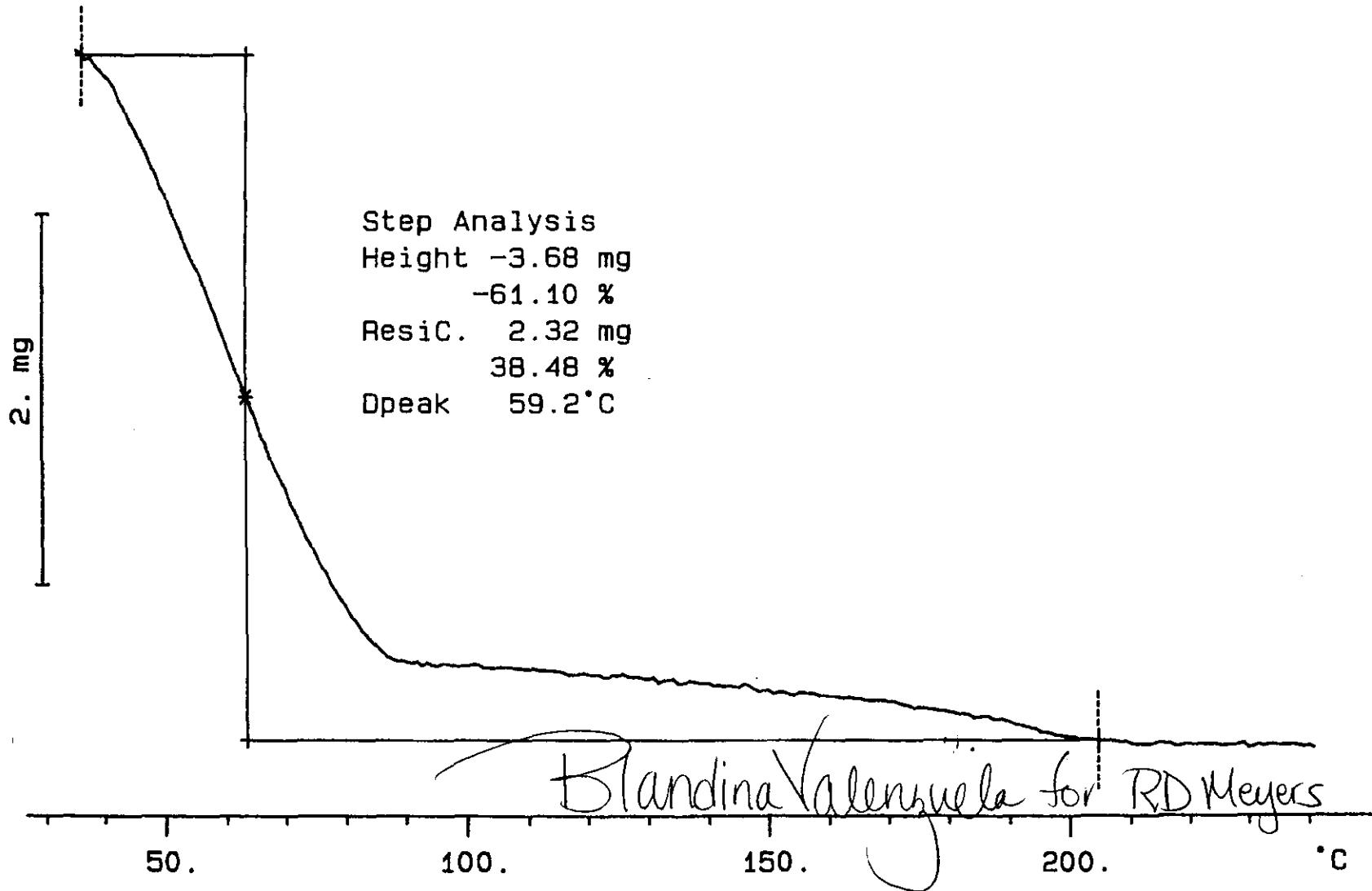
Step Analysis
Height -5.36 mg
-21.26 %
ResiC. 19.86 mg
78.74 %
Dpeak 129.0 °C



2-243

TGA STD 75N8-A
6.019 mg

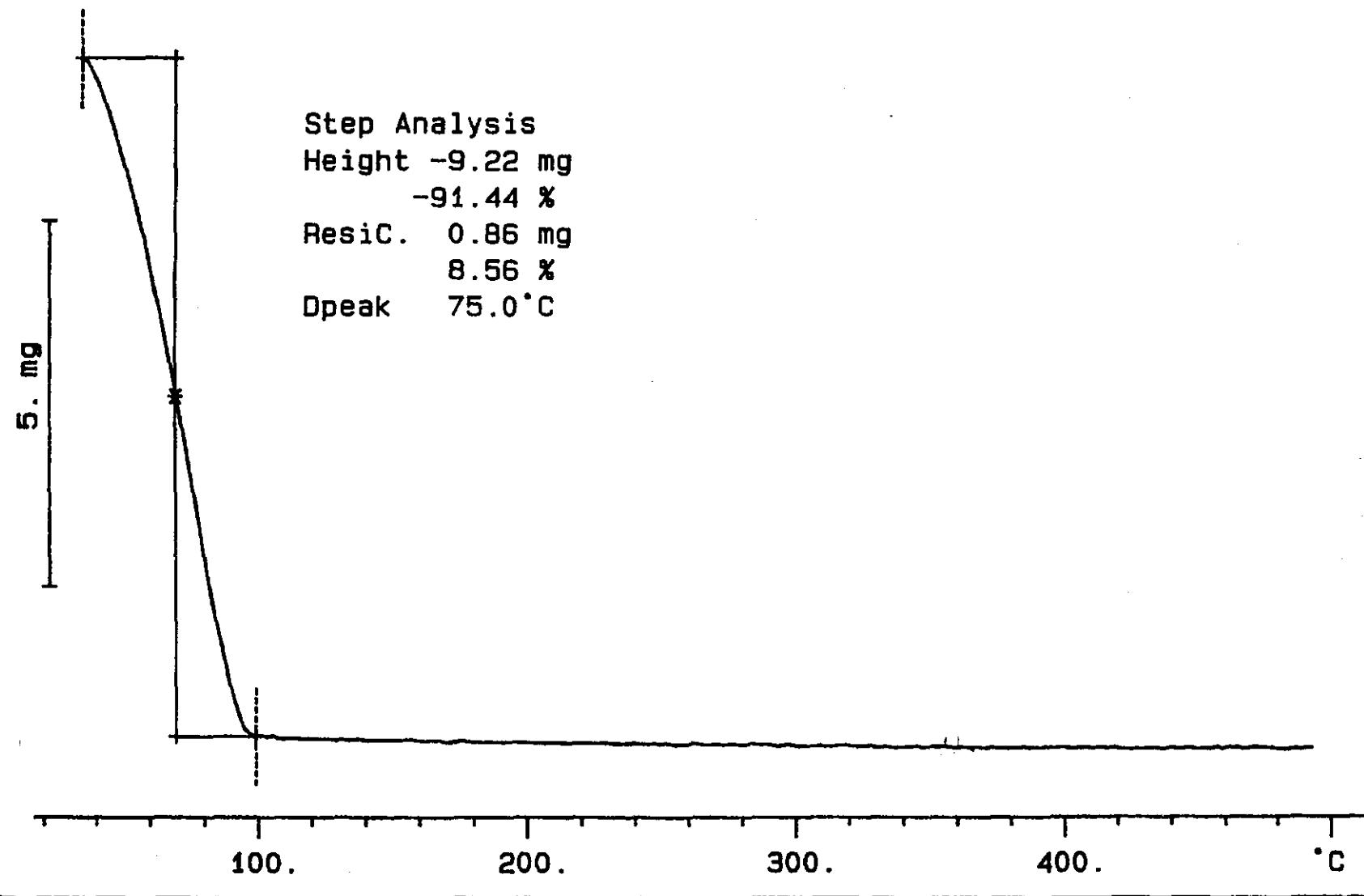
Rate: 10.0 °C/min

File: 00016.001 TG METTLER 09-Apr-96
Ident: 0.0 222-S Laboratory

S96T001070 SAM N2

10.085 mg

Rate: 10.0 °C/min

File: 00018.001 TG METTLER 09-Apr-96
Ident: 0.0 222-S Laboratory

S96T001070 DUP N2

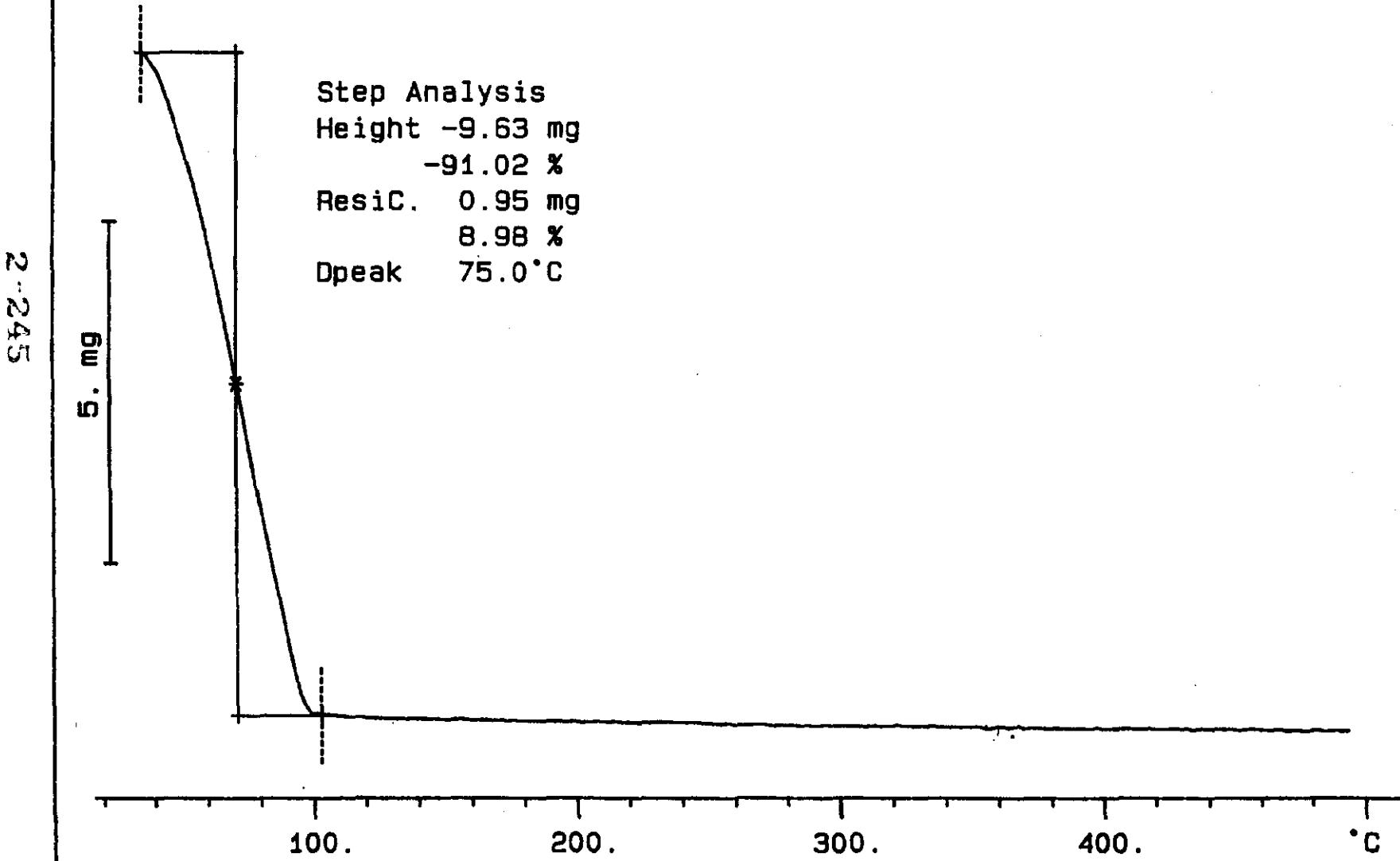
10.578 mg

Rate: 10.0 °C/min

File: 00020.001 TG METTLER 09-Apr-96

Ident: 0.0 222-S Laboratory

Step Analysis
Height -9.63 mg
-91.02 %
ResiC. 0.95 mg
8.98 %
Dpeak 75.0 °C



worklistrpt Version 2.1 05/15/95
04/08/96 12:09

WHC-SD-WM-DP-184, REV. 1

Page: 1

LABCORE Data Entry Template for Worklist#

6656

Analyst: RDM Instrument: TGA01/ 3 Book # 75N8AMethod: LA-514-114 Rev/Mod C-1

Worklist Comment: U-107 FOR TGA (RUN UNDER N2 PLEASE!) RTS!

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		TGA-03	SOLID	<u>59.2</u>	<u>60.40</u>	N/A	%
96000126	U-107	2 SAMPLE	S96T001128 0	TGA-03	SOLID	<u>N/A</u>	<u>18.94</u>		%
96000126	U-107	3 DUP	S96T001128 0	TGA-03	SOLID	<u>18.94</u>	<u>24.24</u>	N/A	%

Final page for worklist #

6656

See attached for signatures

Analyst Signature Date 4-8-96 por

Dan Hammitt 4-9-96

Analyst Signature Date

Verified by Hanastos 4-11-96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist#**6656**Analyst: RJm

Instrument: TGA01

Book # 75NBAMethod: LA-560-112 Rev/Mod C-1

Worklist Comment: U-107 FOR TGA (RUN UNDER N2 PLEASE!) RTS!

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		TGA-01	SOLID			N/A	%
96000126	U-107	2 SAMPLE	S96T001128 0	TGA-01	SOLID	N/A			%
96000126	U-107	3 DUP	S96T001128 0	TGA-01	SOLID			N/A	%

Final page for worklist #**6656**KM
Analyst Signature4/15/96
Date

Analyst Signature

Date

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

0111

Curve 1: TGA

File info: TER040401 Thu Apr 4 07:03:08 1996

Sample Weight: 22.156 mg

TGA STD 75N8-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2948 TO 2950

→ → MO-924 200W

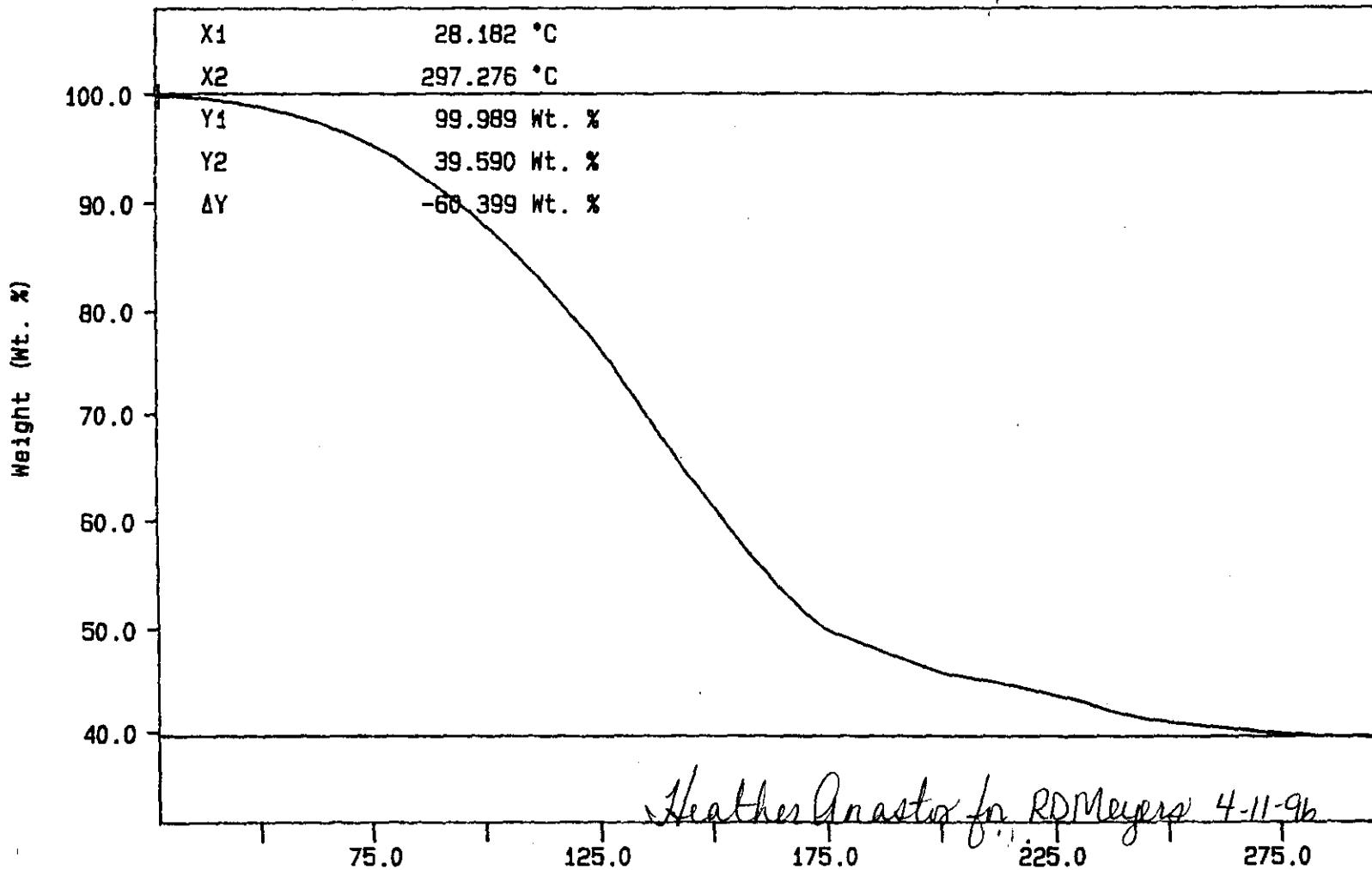
WESTINGHOUSE

2-248

2509 372 2929

14:52

04/08/96



N2 10C/MIN
TEMP1: 35.0 °C TIME1: 0.0 min RATE1: 10.0 °C/min
TEMP2: 300.0 °C

Temperature (°C)

PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Apr 5 01:21:22 1996

WHC-SD-WM-DR-184, REV. 1

04/08/96

14:52 2509 372 2929

WESTINGHOUSE

2-249

00-924 200W

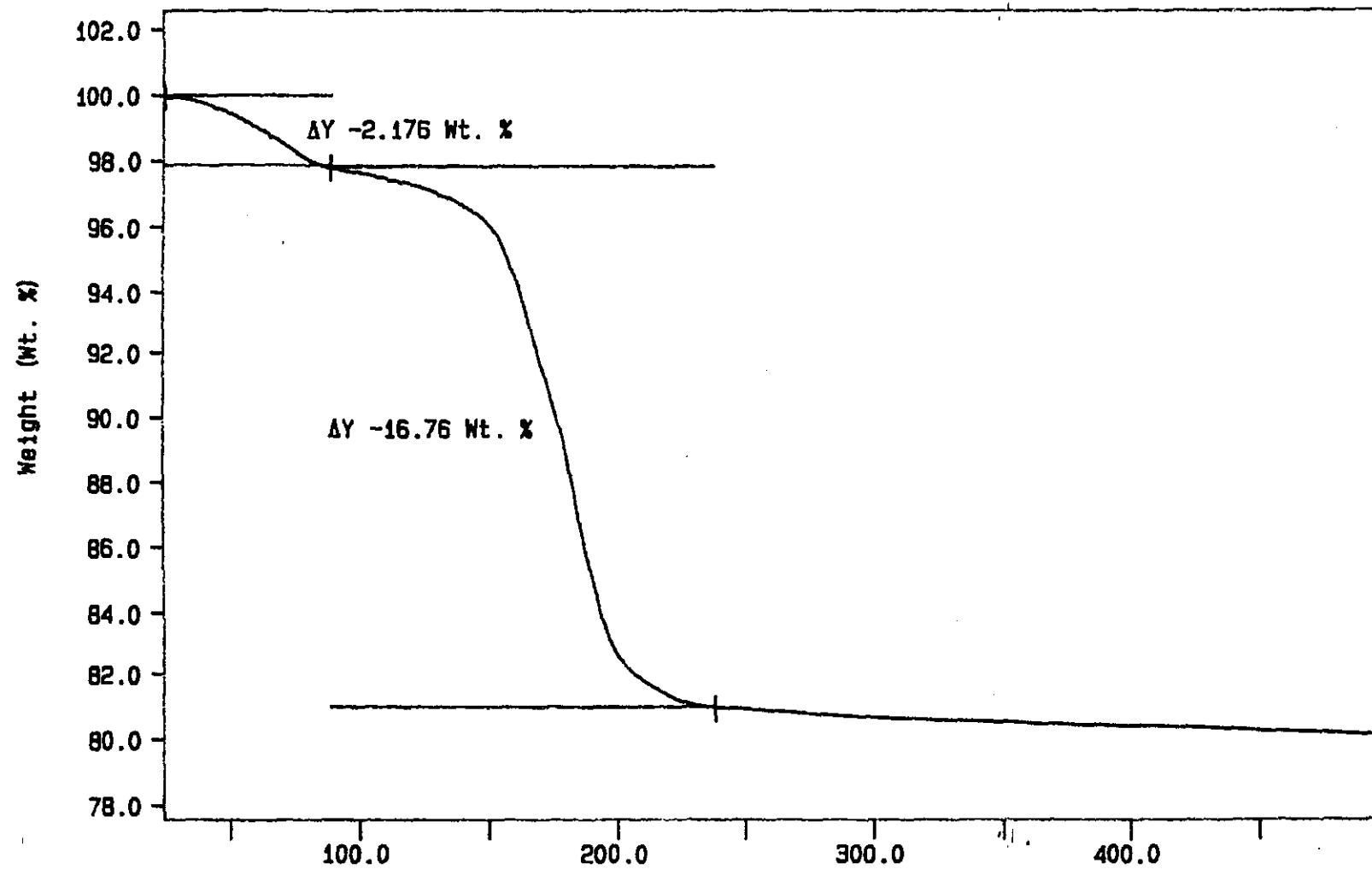
rd meyers

Curve 1: TGA

File info: sam040401 Thu Apr 4 22:29:48 1996

Sample Weight: 32.221 mg

S96T001128



10C/MIN N2
TEMP1: 35.0 °C TIME1: 0.0 min RATE1: 10.0 °C/min

Temperature (°C)

rd meyers
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Apr 8 11:29:47 1996

0113

→→→ MO-924 200W

WESTINGHOUSE

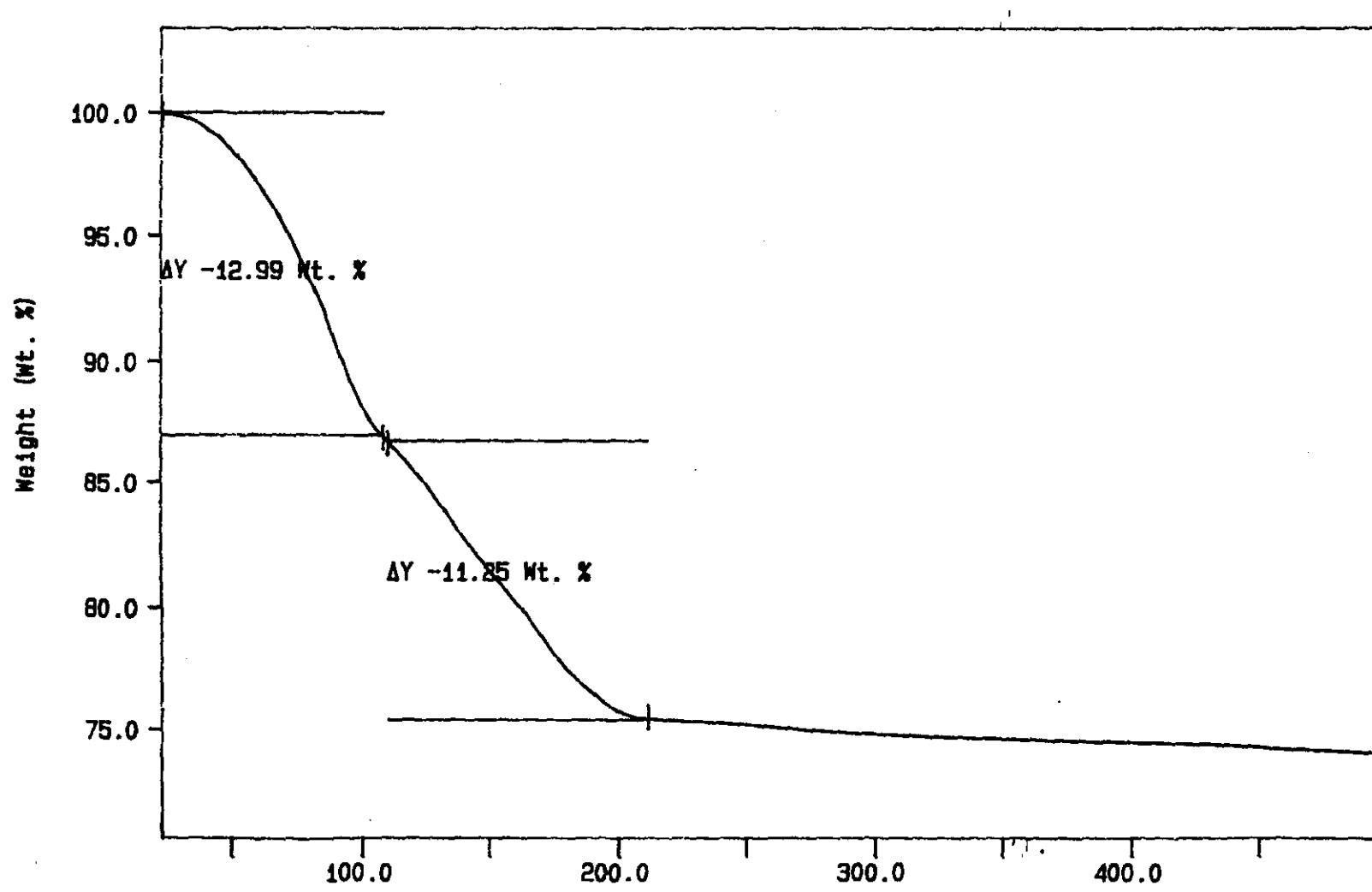
Curve 1: TGA

File info: sam040501 Fri Apr 5 01:54:25 1996

Sample Weight: 9.630 mg

S96T00112B DUP

OS2-2



10C/MIN N2

TEMP: 35.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

rd meyers
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Apr 8 11:42:43 1996

04/08/96

WHC-SD-MM-DR-184, REV. 1

WHC-SD-WM-DP-184, REV. 1

worklistprt Version 2.1 05/15/95
04/23/96 11:30

Page: 1

LABCORE Data Entry Template for Worklist#**6758**Analyst: PJM Instrument: TGA0 1 Book #: 82N8AMethod: LA-560-112 Rev/Mod B-1

Worklist Comment: U-107 FOR TGA-01 PLEASE RUN UNDER N2 RTS!

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.2</u>	<u>58.64</u> *	N/A	%
96000085	U-107	2 SAMPLE	S96T001159	0	TGA-01	SOLID	<u>N/A</u>	<u>18.01</u>		%
96000085	U-107	3 DUP	S96T001159	0	TGA-01	SOLID	<u>18.01</u>	<u>21.43</u>	N/A	%
96000085	U-107	4 TRIP	S96T001159	0	TGA-01	SOLID	<u>18.01</u>	<u>21.25</u>	N/A	%

Final page for worklist # 6758See attached for signatures.

Analyst Signature Date 4/23/96

K Wright 4/24/96

Analyst Signature Date

Verified by PJMastoros 4-25-96

Data Entry Comments: Sample results are the sum of two weight loss steps

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist#**6758**Analyst: RJMcClown

Instrument: TGA0

Book # 82W8AMethod: LA-560-112 Rev/Mod B-1

Worklist Comment: U-107 FOR TGA-01 PLEASE RUN UNDER N2 RTS!

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID			N/A	%
96000085	U-107	2 SAMPLE	S96T001159	0	TGA-01	SOLID	N/A			%
96000085	U-107	3 DUP	S96T001159	0	TGA-01	SOLID			N/A	%

Final page for worklist #**6758**RJMcClown 4/19/96
Analyst Signature Date

Analyst Signature Date

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 253 TO 256

TGA STD 82N8A

27.898 mg

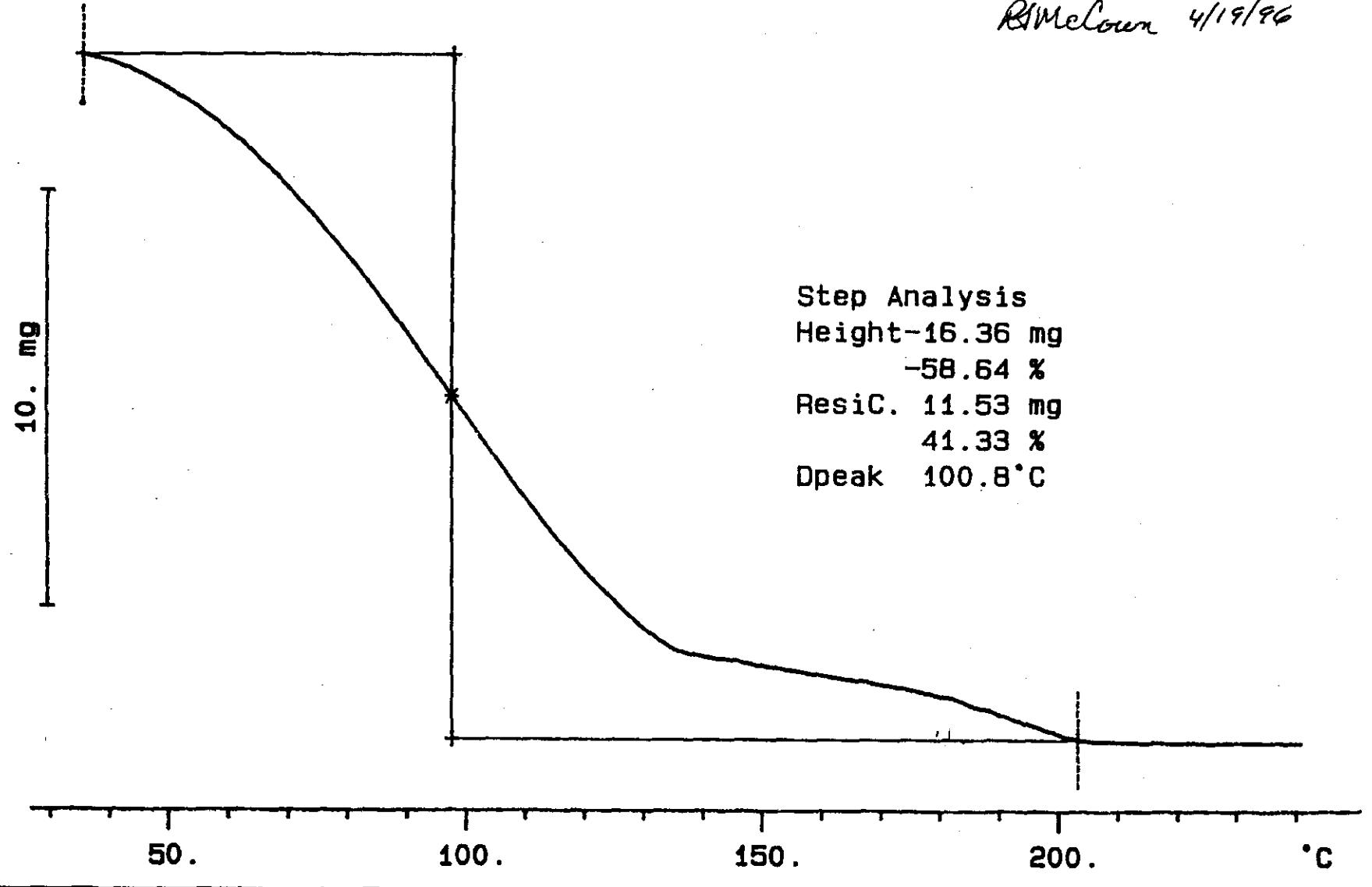
Rate: 10.0 °C/min

File: 00002.001 TG METTLER 19-Apr-96

Ident: 0.0

222-S Laboratory

RJMcLown 4/19/96



S96T001159 SAM N2

43.785 mg

Rate: 10.0 °C/min

File: 00007.001 TG METTLER 19-Apr-96

Ident: 0.0 222-S Laboratory

RJ McCown 4/19/96

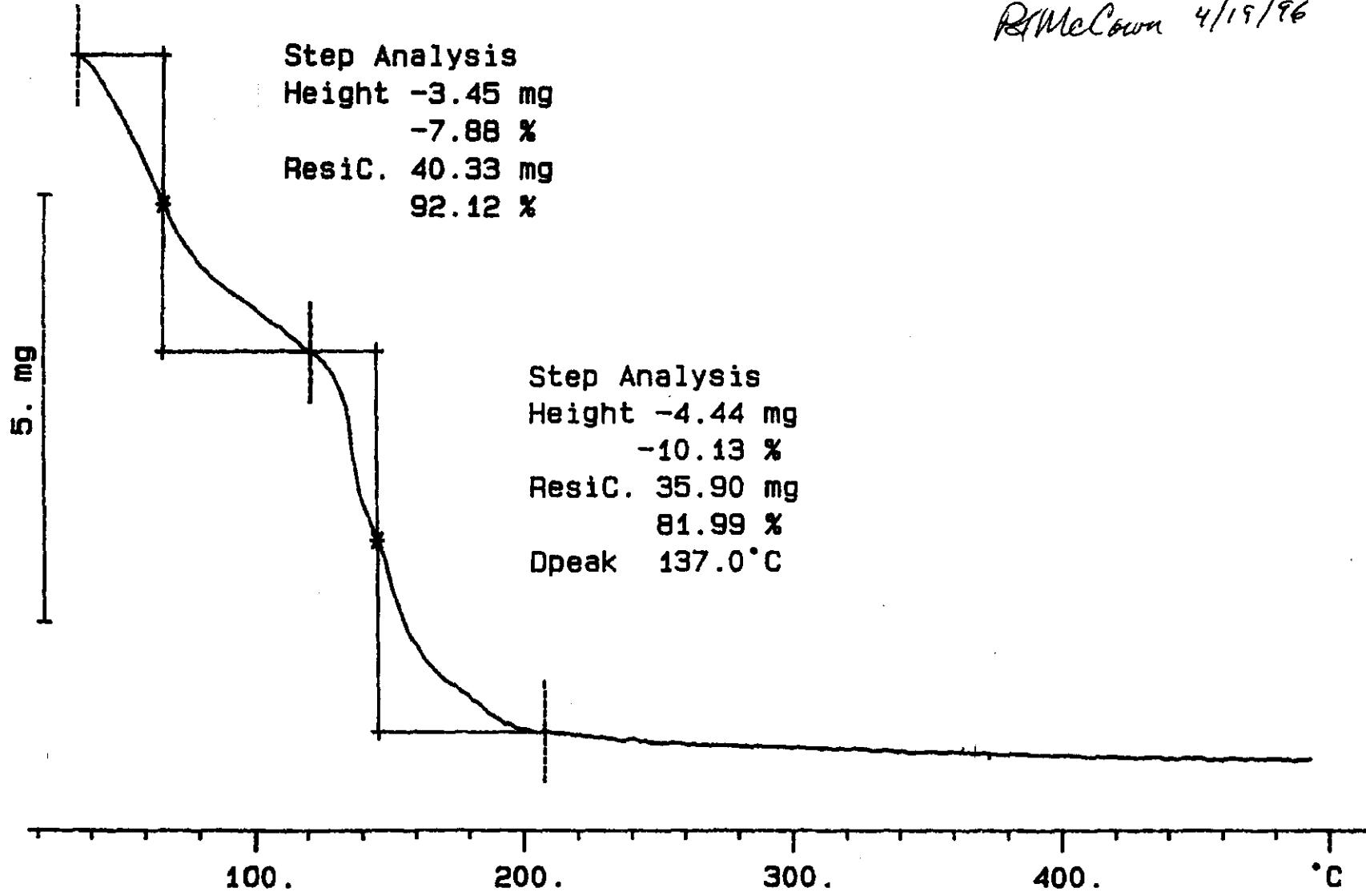
Step Analysis

Height -3.45 mg

-7.88 %

ResiC. 40.33 mg

92.12 %



S96T001159 DUP N2

24.352 mg

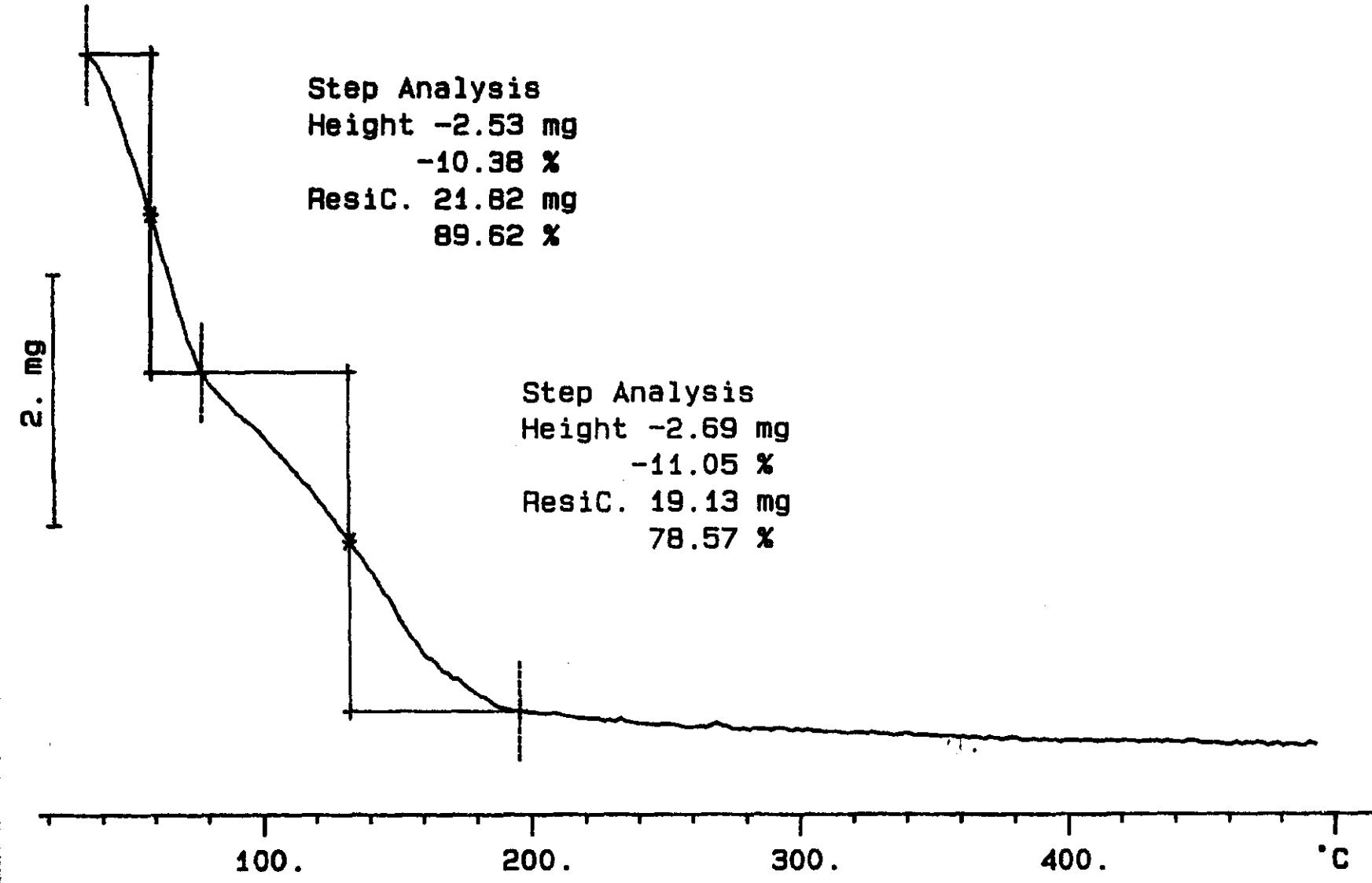
Rate: 10.0 °C/min

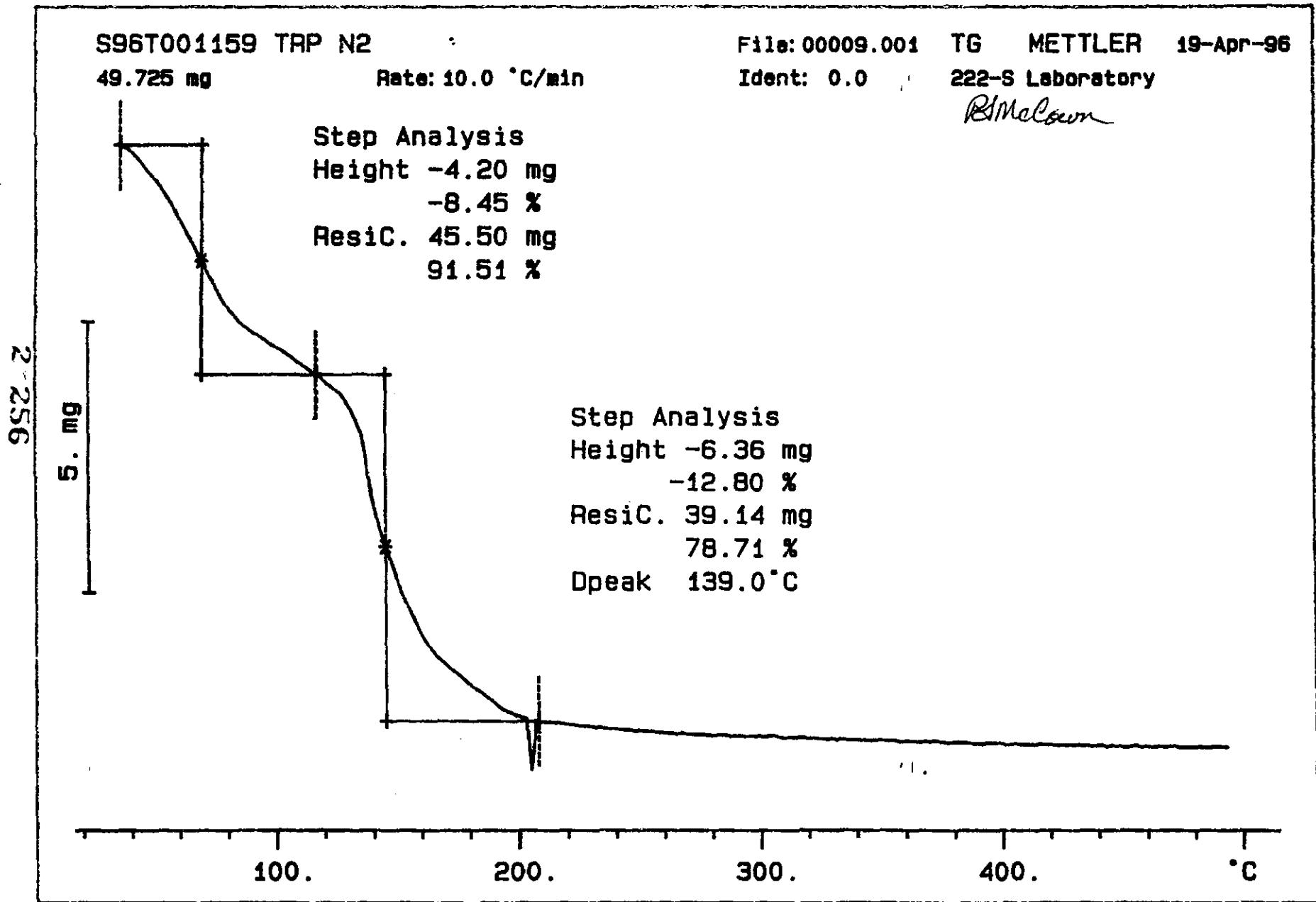
File: 00008.001 TG METTLER 19-Apr-96

Ident: 0.0 222-S Laboratory

Step Analysis
Height -2.53 mg
-10.38 %
ResiC. 21.82 mg
89.62 %

Step Analysis
Height -2.69 mg
-11.05 %
ResiC. 19.13 mg
78.57 %





WHC-SD-WM-DP-184, REV. 1

worklistrpt Version 2.1 05/15/95
04/17/96 10:34

Page: 1

LABCORE Data Entry Template for Worklist#**7585**Analyst: SMF Instrument: TGA0 3 Book # 82N8AMethod: LA-514-114 Rev/Mod C-1

Worklist Comment: U-107 TGA RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		TGA-03	LIQUID	<u>59.2</u>	<u>58.97</u>	<u>N/A</u>	%
96000126	U-107	2 SAMPLE	S96T001119 0	TGA-03	LIQUID	<u>N/A</u>	<u>51.01</u>		%
96000126	U-107	3 DUP	S96T001119 0	TGA-03	LIQUID	<u>51.01</u>	<u>51.14</u>	<u>N/A</u>	%
96000126	U-107	4 SAMPLE	S96T001120 0	TGA-03	LIQUID	<u>N/A</u>	<u>89.27</u>		%
96000126	U-107	5 DUP	S96T001120 0	TGA-03	LIQUID	<u>89.27</u>	<u>89.10</u>	<u>N/A</u>	%
96000126	U-107	6 SAMPLE	S96T001121 0	TGA-03	LIQUID	<u>N/A</u>	<u>91.70</u>		%
96000126	U-107	7 DUP	S96T001121 0	TGA-03	LIQUID	<u>91.70</u>	<u>92.22</u>	<u>N/A</u>	%

Final page for worklist # **7585**See attached for signaturesAnalyst Signature SMF Date 4/17/96Analyst Signature R. H. Hanastos Date 4-19-96Verified by R. H. Hanastos 4-22-96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist#**7585**Analyst: SMF Instrument: TGA0 Book # 82N8A

Method: LA-560-112 Rev/Mod

Worklist Comment: U-107 TGA RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		TGA-01	LIQUID			N/A	%
96000126	U-107	2 SAMPLE	S96T001110 0	TGA-01	LIQUID	N/A			%
96000126	U-107	3 DUP	S96T001110 0	TGA-01	LIQUID			N/A	%
96000126	U-107	4 SAMPLE	S96T001119 0	TGA-01	LIQUID	N/A			%
96000126	U-107	5 DUP	S96T001119 0	TGA-01	LIQUID			N/A	%
96000126	U-107	6 SAMPLE	S96T001120 0	TGA-01	LIQUID	N/A			%
96000126	U-107	7 DUP	S96T001120 0	TGA-01	LIQUID			N/A	%
96000126	U-107	8 SAMPLE	S96T001121 0	TGA-01	LIQUID	N/A			%
96000126	U-107	9 DUP	S96T001121 0	TGA-01	LIQUID			N/A	%

Final page for worklist # 7585Susie M. Fulton 4-16-96

Analyst Signature Date

Analyst Signature Date

Other instrument
was used.

4/17/96
BMY

Data Entry Comments:

S96T001110 - EMPTY

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

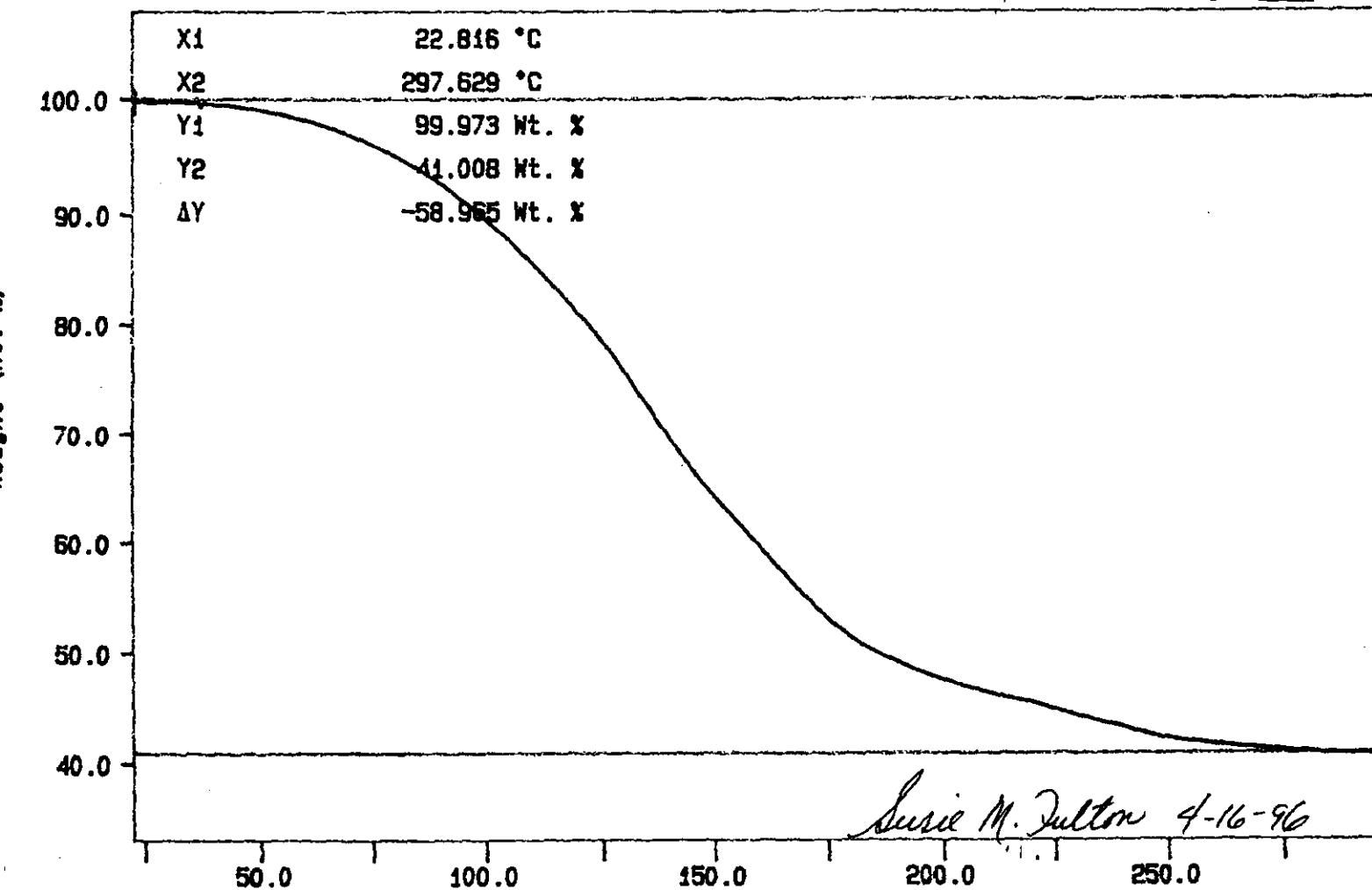
Curve 1: TGA

File info: TER041601 Tue Apr 16 07:24:33 1996

Sample Weight: 24.029 mg

TGA STD 82NB-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2059 TO 2065



→ → MO-924 200W

WESTINGHOUSE

2-2259

G509 372 2929

14:35

04/17/96

N₂ 100/MIN
TEMP: 300.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Apr 16 07:25:27 1996

0417

→→→ MO-924 200W

WESTINGHOUSE

14:36 2509 372 2929

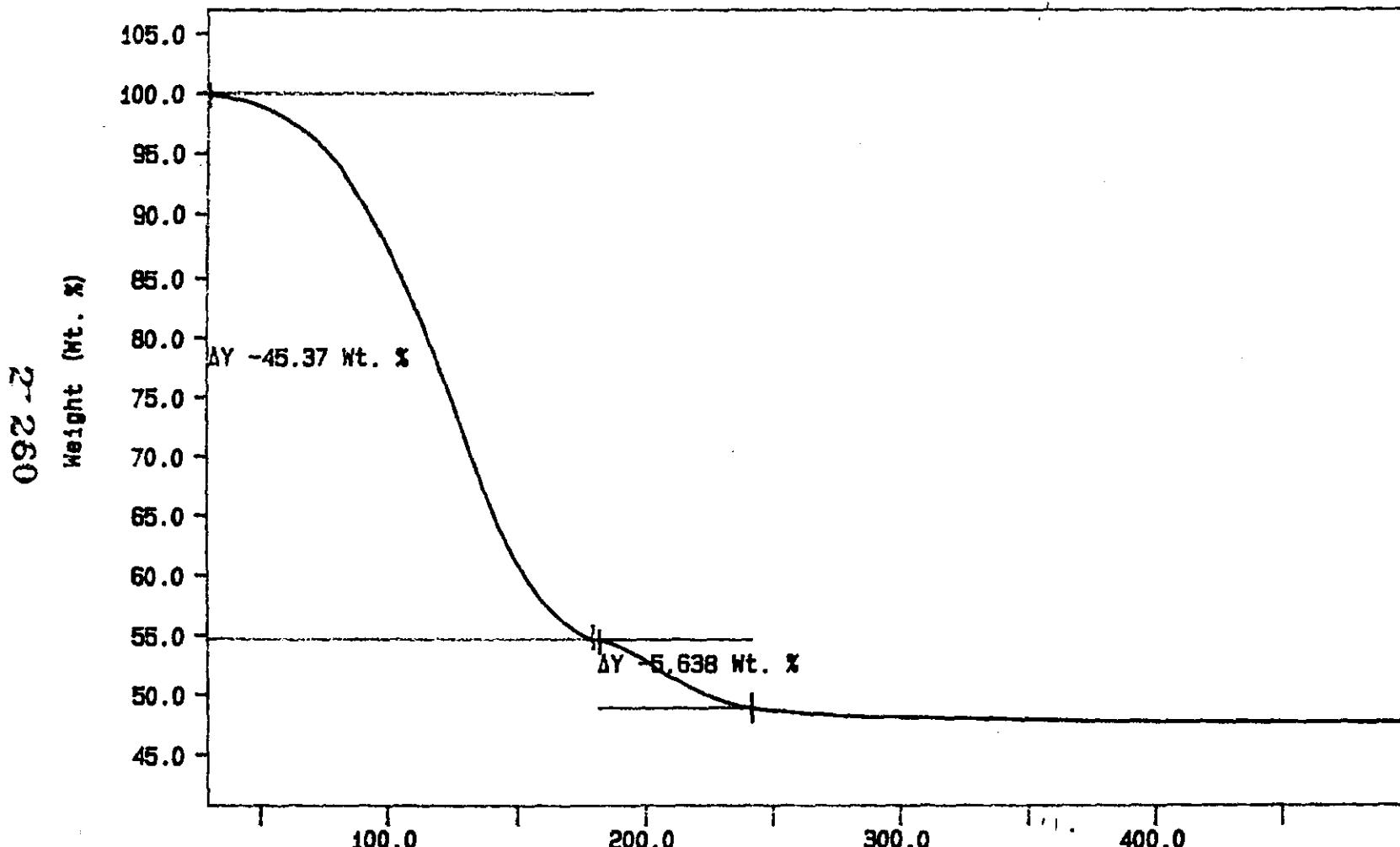
04/17/96

Curve i: TGA

File info: SAM041601 Tue Apr 16 09:22:17 1996

Sample Weight: 14.242 mg

S96T001119



10C/MIN N2

TEMP: 30.0 °C TIME: 0.0 min RATE: 10.0 °C/min

TEMP: 500.0 °C

Temperature (°C)

SM FULTON

PERKIN-ELMER

7 Series Thermal Analysis System

Tue Apr 16 09:29:43 1996

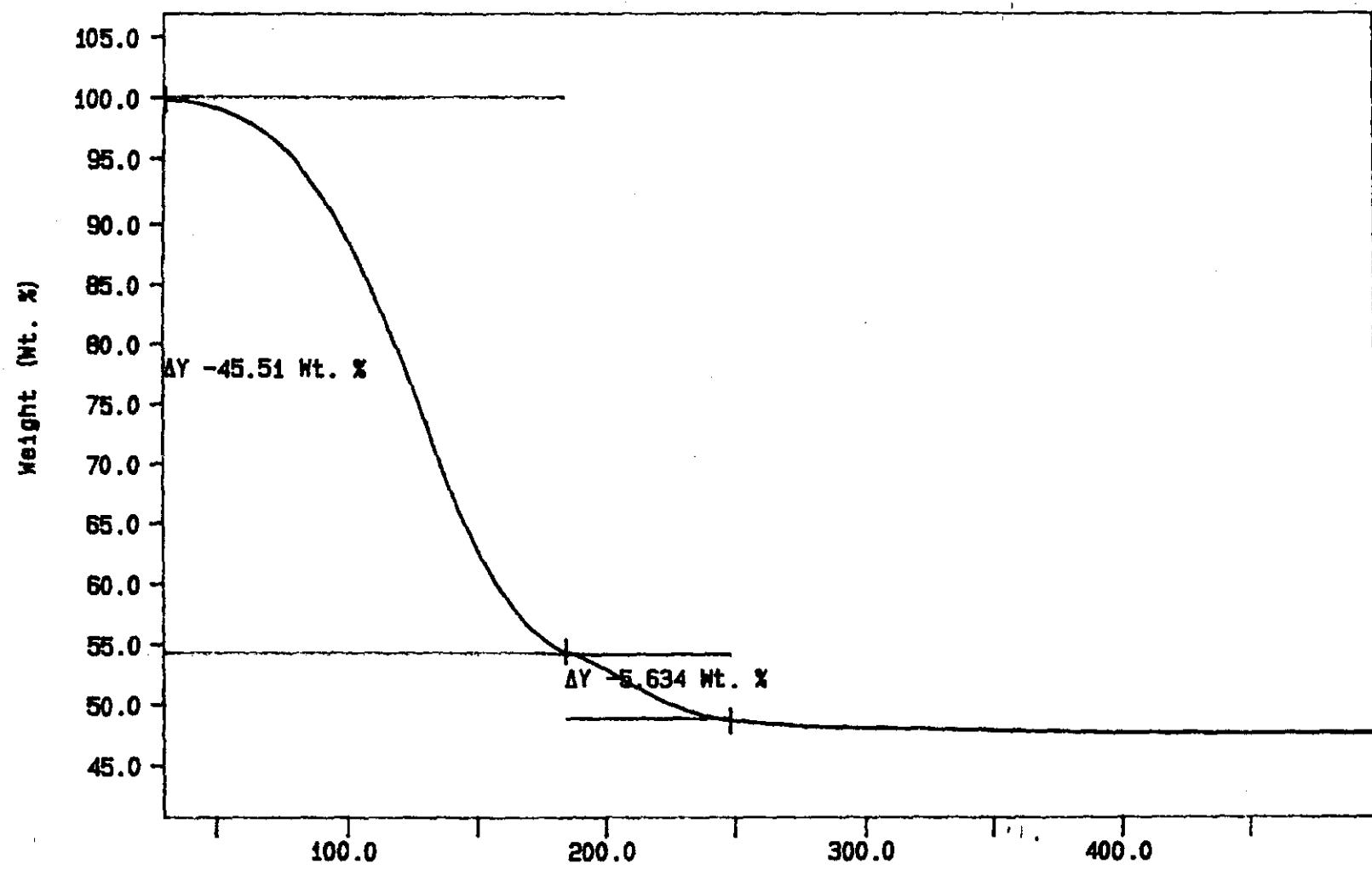
Curve 1: TGA

File info: SAM041602 Tue Apr 16 10:29:17 1996

Sample Weight: 15.617 mg

S96T001119 DUP

2-261



10C/MIN N2
TEMP: 25.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Apr 16 10:31:41 1996

04/19

Curve i: TGA

File info: SAM041603 Tue Apr 16 11:35:14 1996

Sample Weight: 11.199 mg

S96T001120

→ → MO-924 200W

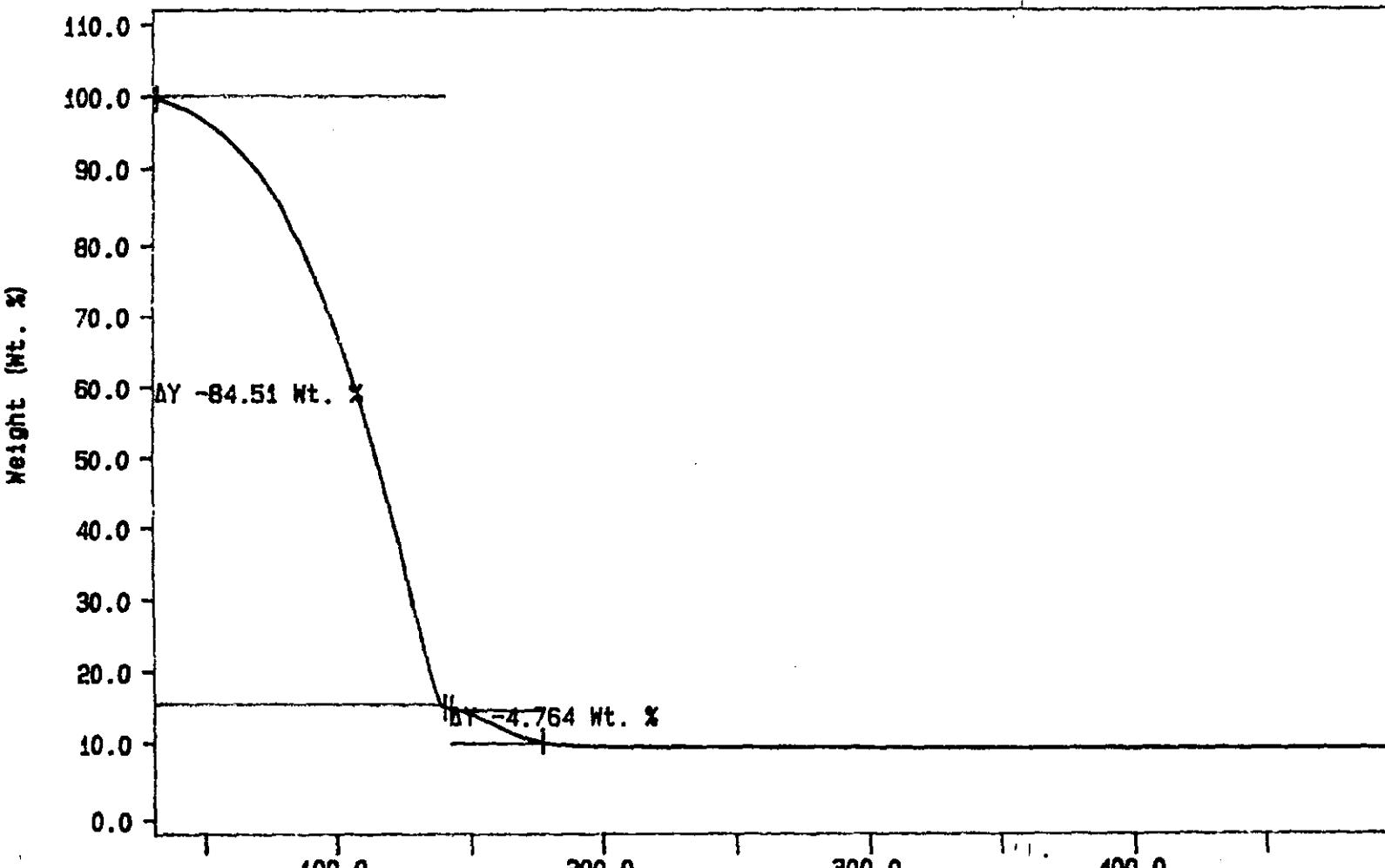
WESTINGHOUSE

2-262

2509 372 2929

14:37

04/17/96



10C/MIN N2
TEMP: 35.0 °C TIME: 0.0 min RATE: 10.0 °C/min

TEMP: 300.0 °C

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Apr 16 13:07:01 1996

04/17/96

→→ MO-924 200W

WESTINGHOUSE

509 372 2929

14:37

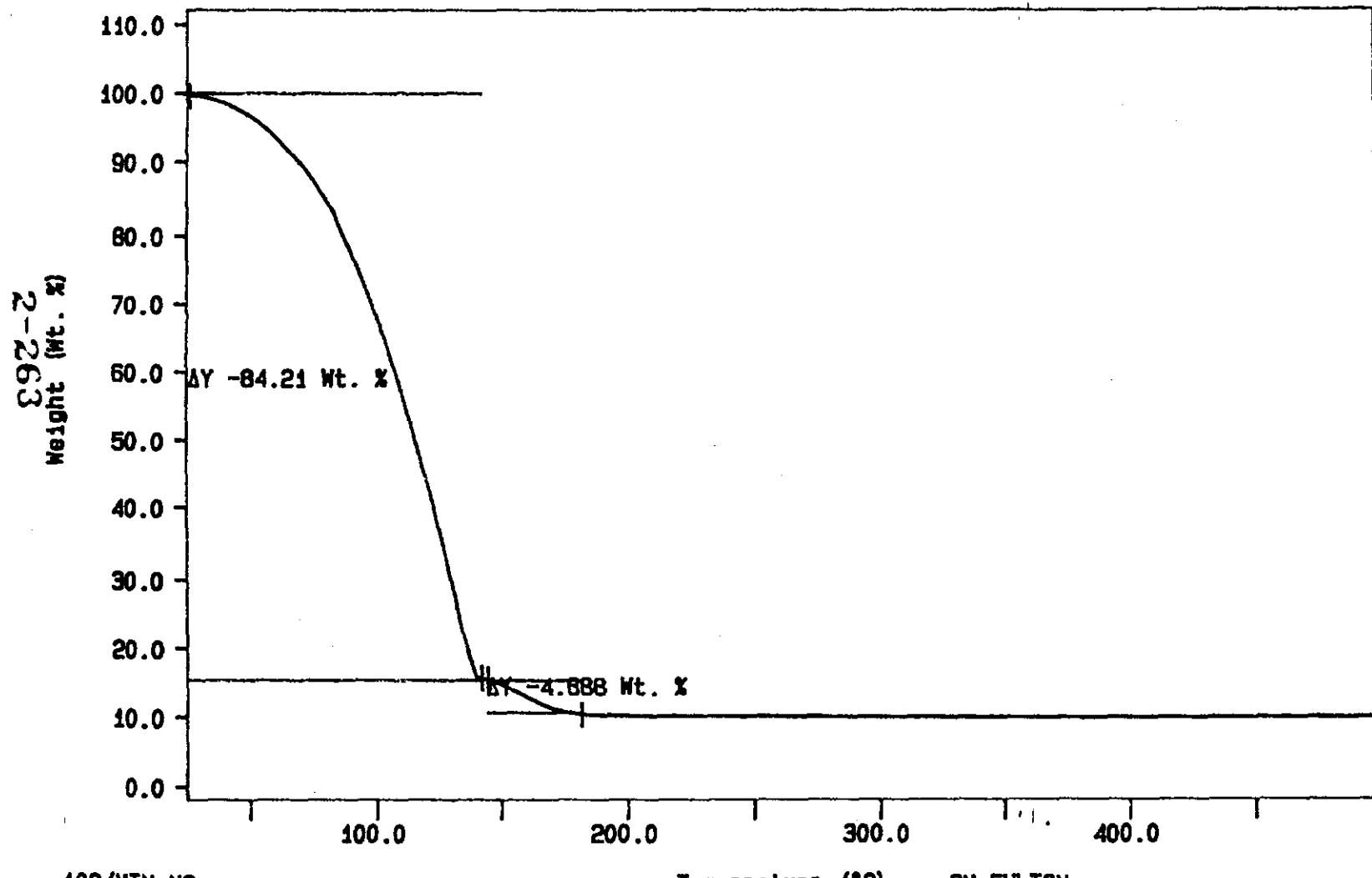
04/17/96

Curve 1: TGA

File info: SAM041604 Tue Apr 16 13:42:15 1996

Sample Weight: 11.262 mg

S96T001120 DUP



10C/MIN N2

TEMP: 25.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

SM FULTON

PERKIN-ELMER

7 Series Thermal Analysis System

Tue Apr 16 13:59:19 1996

021

Curve 1: TGA

File info: SAM041605 Tue Apr 16 14:53:41 1996

Sample Weight: 10.095 mg

S96T001121

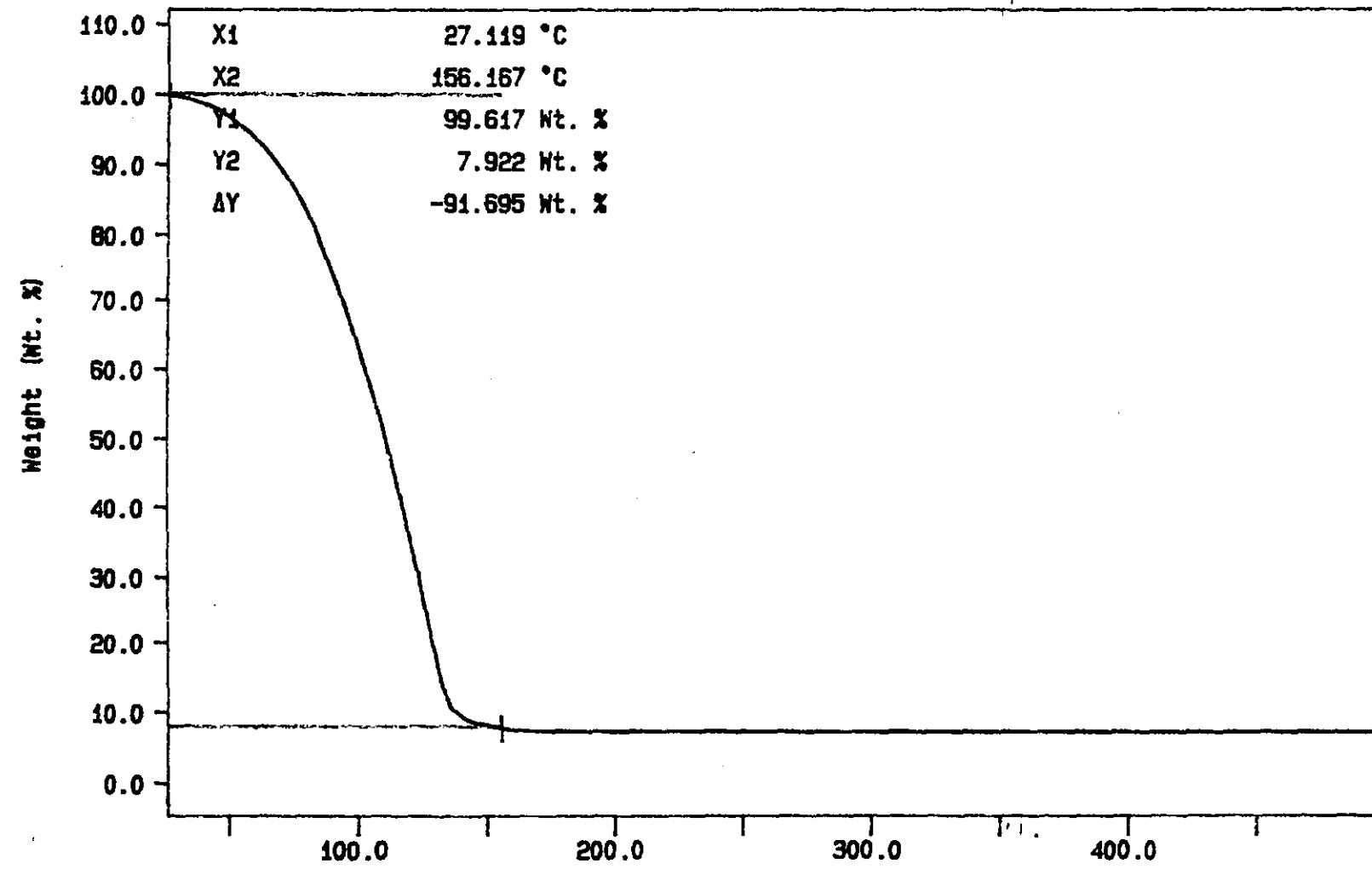
WESTINGHOUSE →→ MO-924 200W

2-2264

509 372 2929

14:38

04/17/96



10C/MIN N2

TEMP: 25.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Apr 16 15:36:38 1996

WHC-SD-WM-DP-184, REV. 1

04/17/96

→ → MO-924 200W

WESTINGHOUSE

509 372 2929

14:38

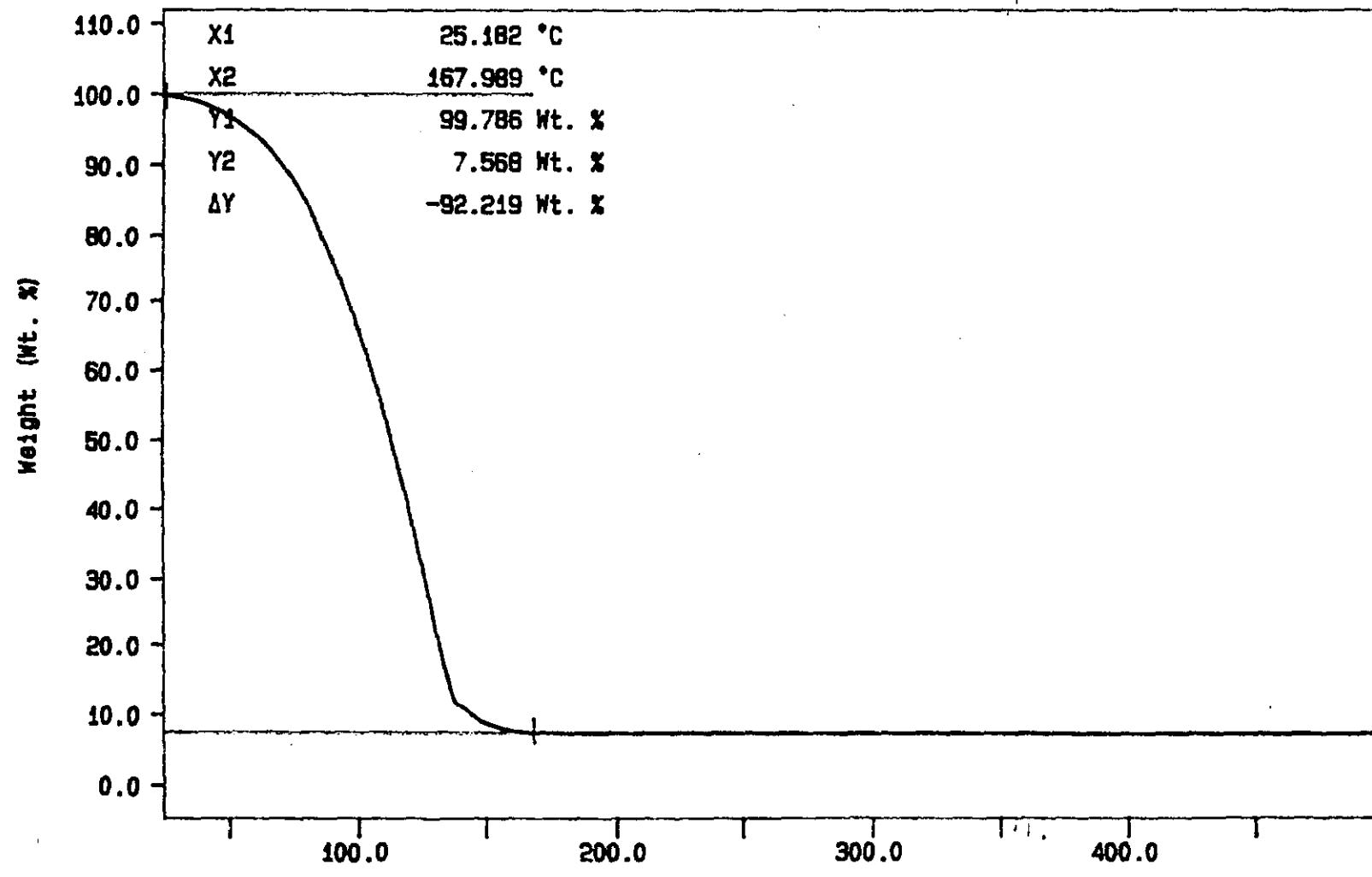
04/17/96

Curve 1: TGA

File info: SAM041606 Tue Apr 16 16:26:23 1996

Sample Weight: 10.279 mg

S96T001121 DUP



10C/MIN N2

TEMP1: 25.0 S TEMP2: 500.0 S TIME1: 0.0 min RATE1: 10.0 C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Apr 16 16:34:29 1996

LABCORE Data Entry Template for Worklist#**7908**Analyst: SMF Instrument: TGA0 1 Book # 82N8AMethod: LA-560-112 Rev/Mod B-1

Worklist Comment: U-07 for tga-01 please run under N2 RTS!

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.2</u>	<u>58.72</u>	X	%
96000422	U-107	2 SAMPLE	S96T001867 0		TGA-01	SOLID	<u>N/A</u>	<u>49.90</u>		x
96000422	U-107	3 DUP	S96T001867 0		TGA-01	SOLID	<u>49.90</u>	<u>49.74</u>	N/A	x

Final page for worklist #**7908**

Smf
Signature Date 4-29-96

Dan Hammert
Signature Date 5-4-96

Verified by Analyst 5-6-96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 267 TO 276

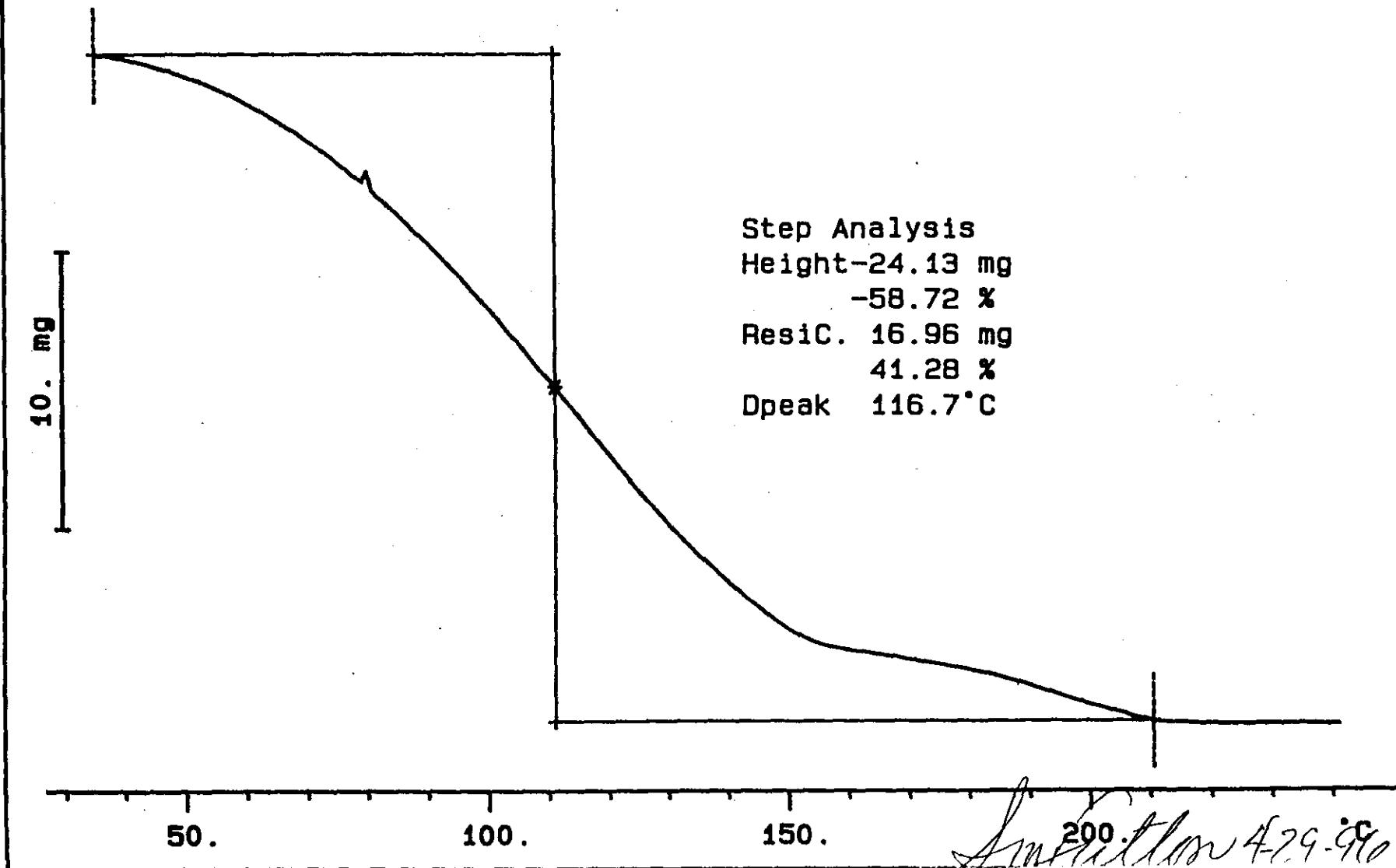
TGA STD 82NBA

41.092 mg

Rate: 10.0 °C/min

File: 00052.001 TG METTLER 29-Apr-96

Ident: 0.0 222-8 Laboratory



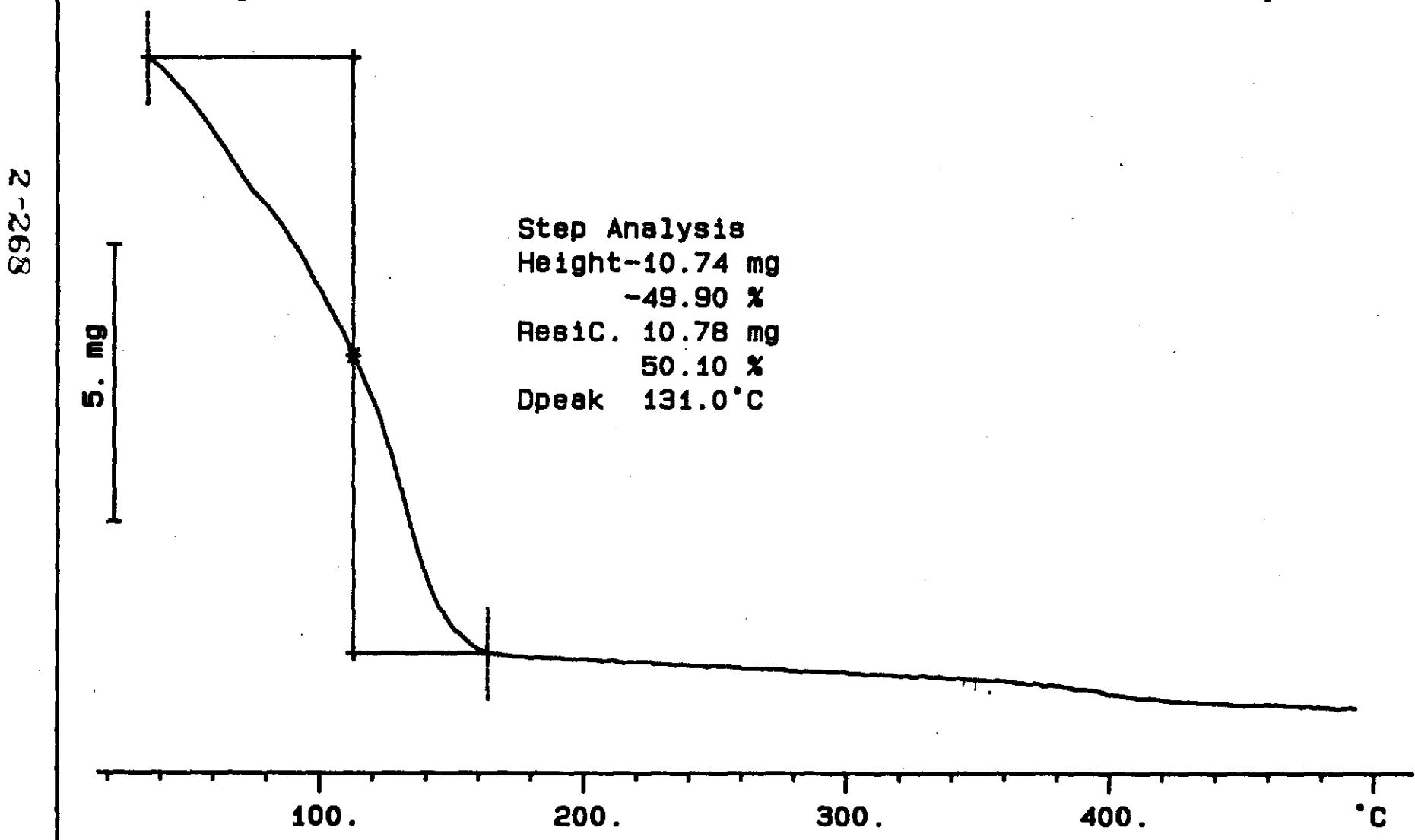
S96T001867 N2

21.518 mg

Rate: 10.0 °C/min

File: 00059.001 TG METTLER 30-Apr-96

Ident: 0.0 222-S Laboratory



S96T001867 DUP N2

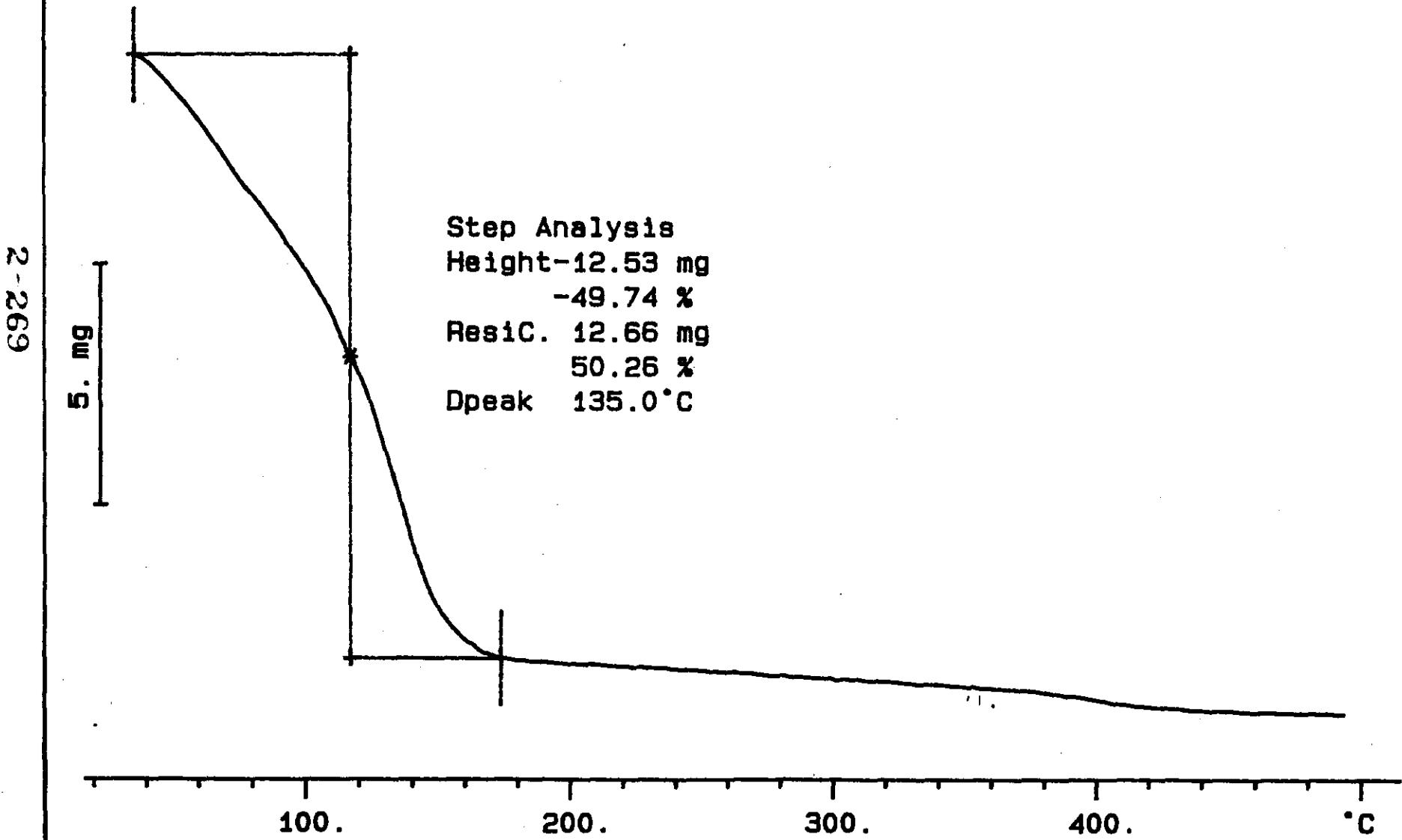
25.198 mg

Rate: 10.0 °C/min

File: 00060.001 TG METTLER 30-Apr-96

Ident: 0.0 222-S Laboratory

Step Analysis
Height-12.53 mg
-49.74 %
Resid. 12.66 mg
50.26 %
Dpeak 135.0 °C



LABCORE Data Entry Template for Worklist#

8037

Analyst: SME Instrument: TGA0 1 Book # 82N8-1Method: LA-560-112 Rev/Mod B-1

Worklist Comment: U-107 TGA RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	59.2	58.74 *	N/A %
96000422	U-107	2 SAMPLE	S96T001873 0		TGA-01	SOLID	N/A	4.67	
96000422	U-107	3 DUP	S96T001873 0		TGA-01	SOLID	4.67	4.15	N/A %

Final page for worklist # 8037Suzanne Fulton 2-26-96
Analyst Signature DateJay Johnson 4-29-96
Analyst Signature Date

Verified by Blandina
Talavera
4.30.96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

2-270



SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 224 TO 2273

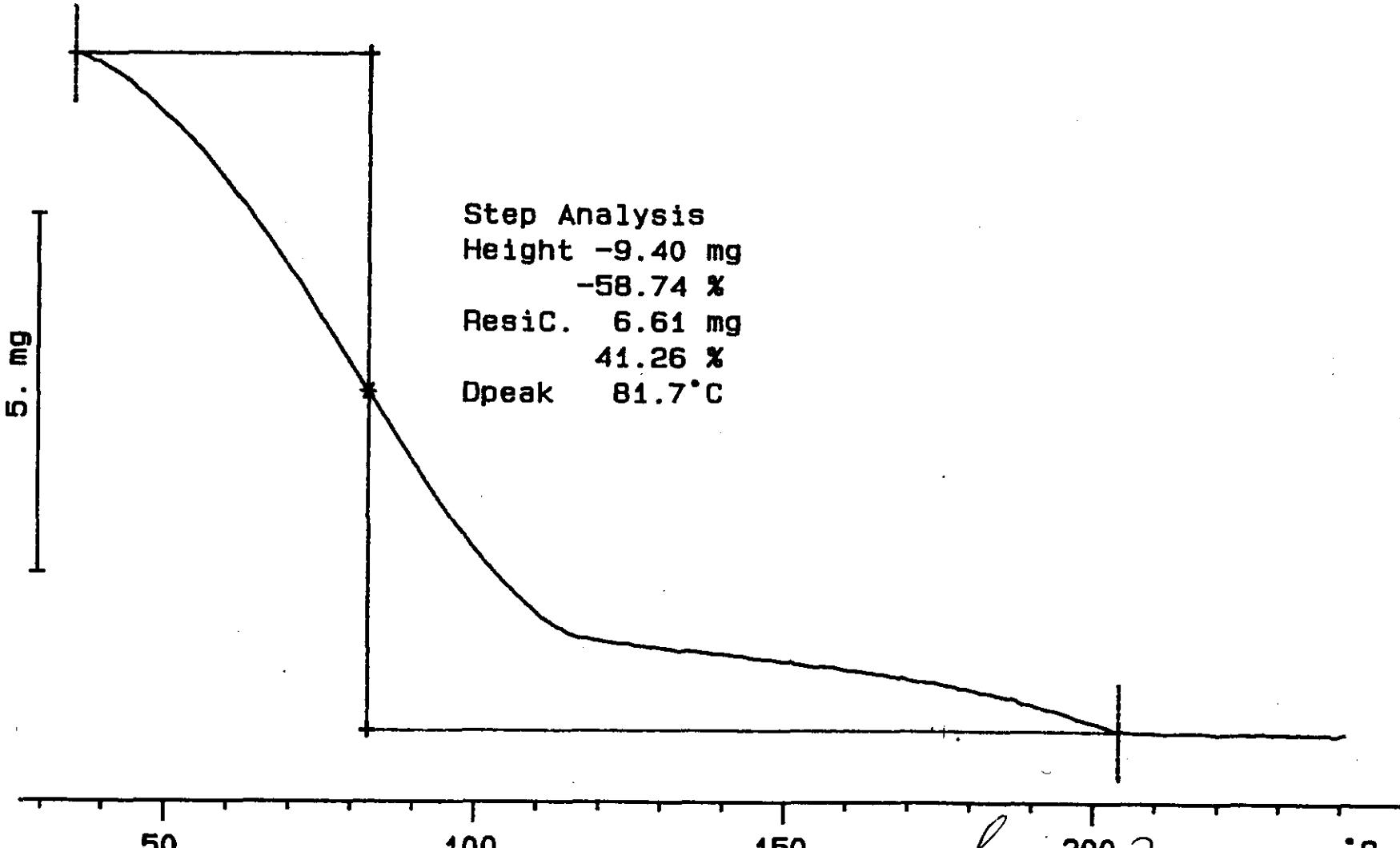
TGA STD 82N8-A

16.007 mg

Rate: 10.0 °C/min

File: 00017.001 TG METTLER 26-Apr-96
Ident: 0.0 222-S Laboratory

22271



Susie M. Fulton 4-26-96

WHC-SD-WM-DP-184, REV. 1

/96-04-29-2:22/001-002

S96T001873 N2

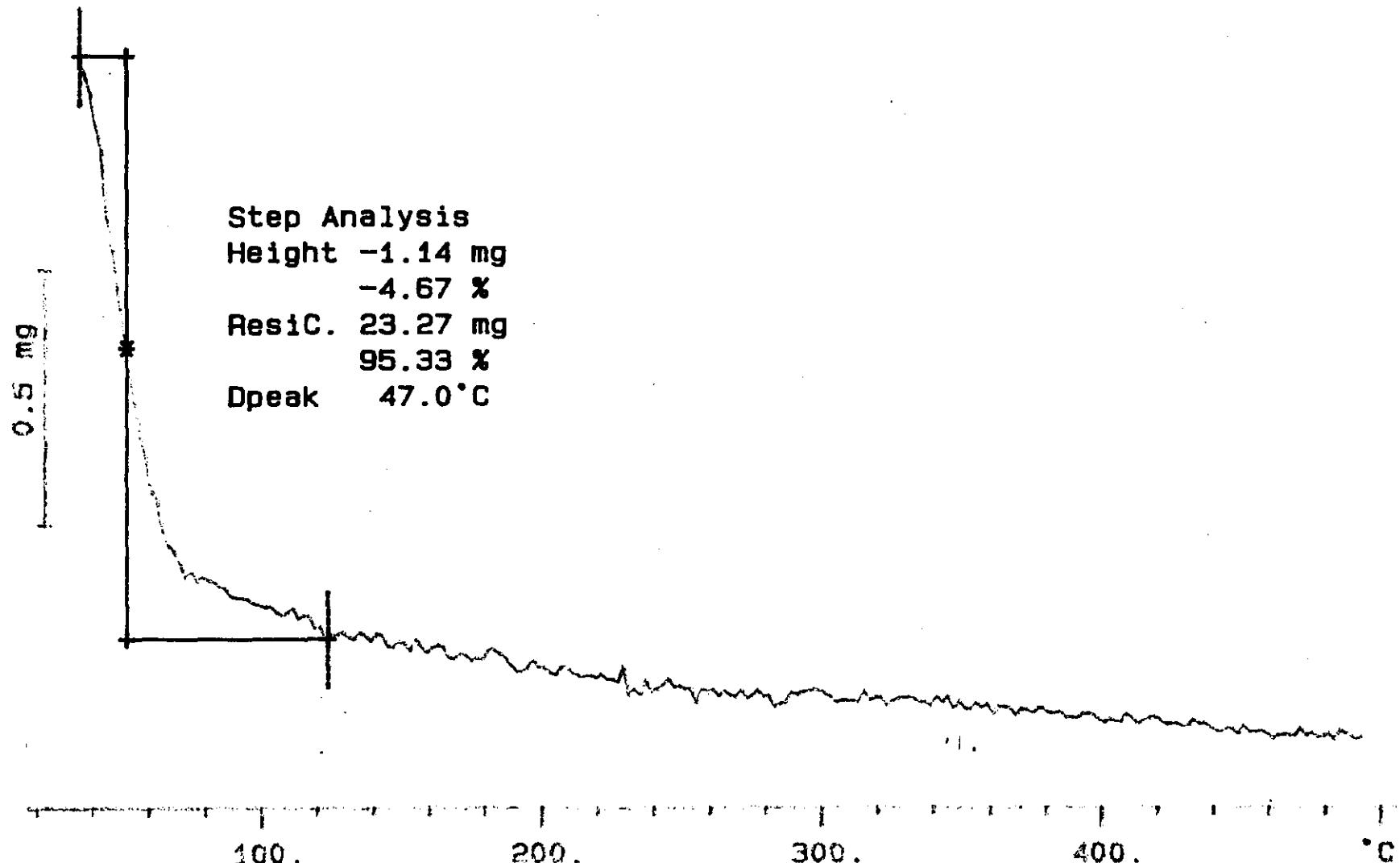
24.412 mg

Rate: 10.0 °C/min

File: 00027.001 TG METTLER 26-Apr-96
Ident: 0.0 222-S Laboratory

Step Analysis
Height -1.14 mg
-4.67 %
ResiC. 23.27 mg
95.33 %
Dpeak 47.0 °C

2-272



S96T001B73 DUP N2

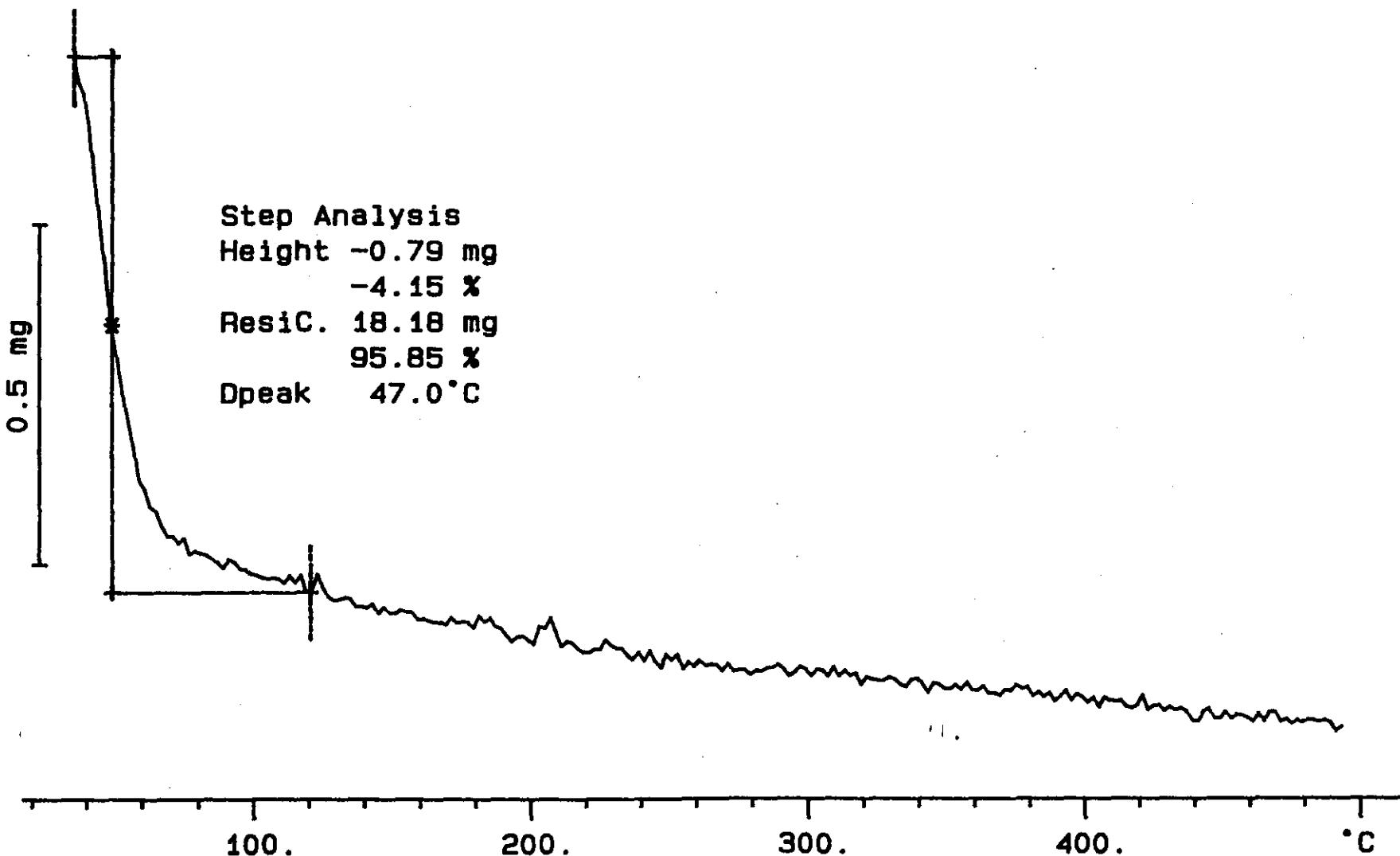
18.965 mg

Rate: 10.0 °C/min

File: 00028,001 TG METTLER 26-Apr-96

Ident: 0.0 222-S Laboratory

2-273



WHC-SD-WM-DP-184, REV. |

/35-24-20-12:22/001-004

LABCORE Data Entry Template for Worklist#

8223

Analyst: JL

Instrument: TGA0 1

Book # 8223AMethod: LA-560-112 Rev/Mod B-1

Worklist Comment: U-107. Run under nitrogen. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		TGA-01	SOLID	59.2	59.02	*	%
96000422	U-107	2 SAMPLE	S96T002131	0	TGA-01	N/A	32.41		%
96000422	U-107	3 DUP	S96T002131	0	TGA-01	Solid	32.41	37.23	N/A %
96000422	U-107	4 SAMPLE	S96T002132	0	TGA-01	N/A	18.55		%
96000422	U-107	5 DUP	S96T002132	0	TGA-01	SOLID	18.55	16.45	N/A %

Final page for worklist # 8223TJL Sjn5-1-96

Analyst Signature

Date

Dave Hansen5-4-96

Analyst Signature

Date

Verified by Hanastor

5-6-96

S96T002131 also produced a second weight loss step of 2.16%. However, the dup only showed one weight loss step.

S96T002132 results are the sum of three weight loss steps (8.78, 1.55, + 8.22%).

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

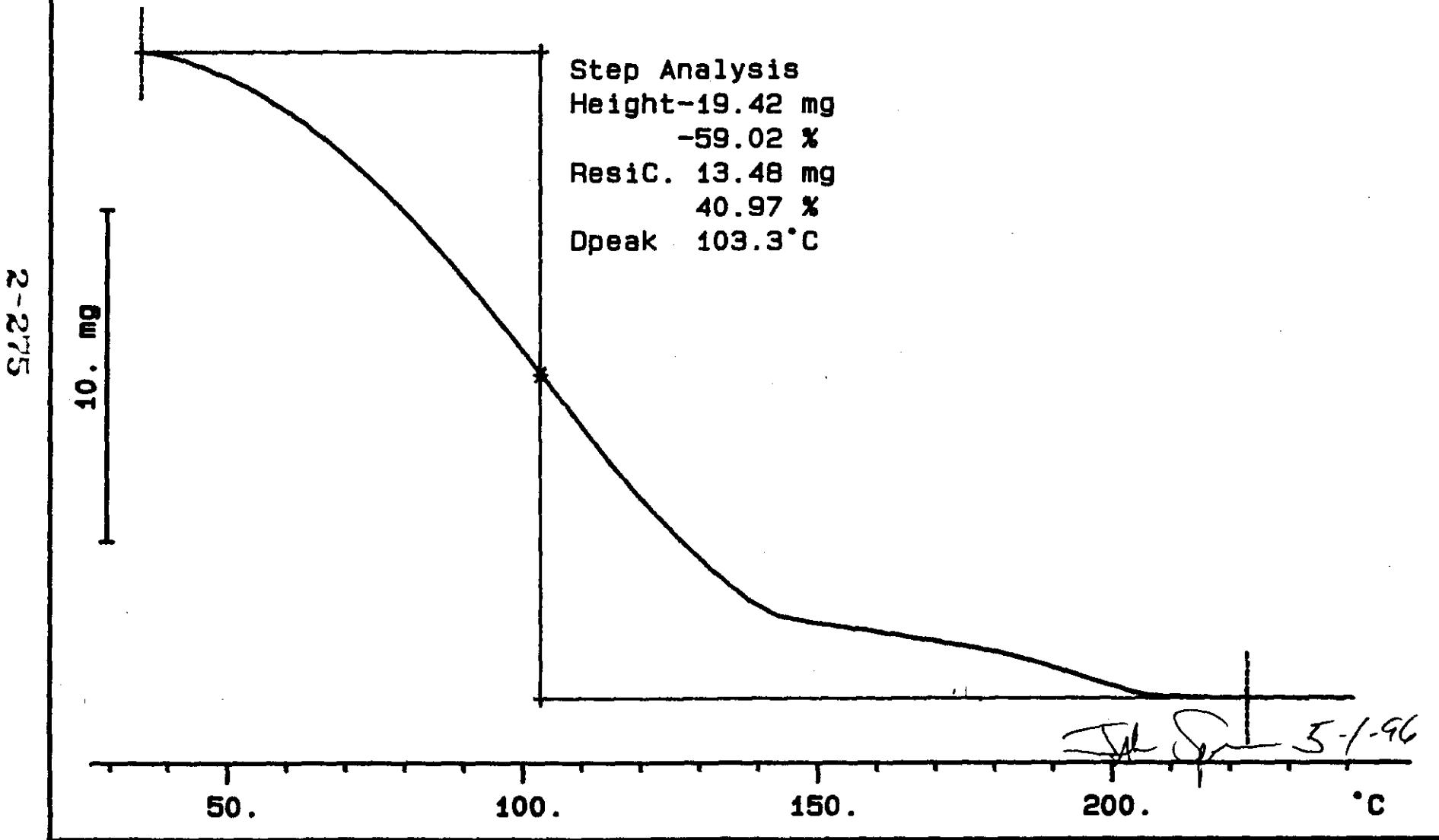
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2-275 TO 2-279

TGA STD 82NBA

32.902 mg

Rate: 10.0 °C/min

File: 00070.001 TG METTLER 01-May-96
Ident: 0.0 222-S Laboratory



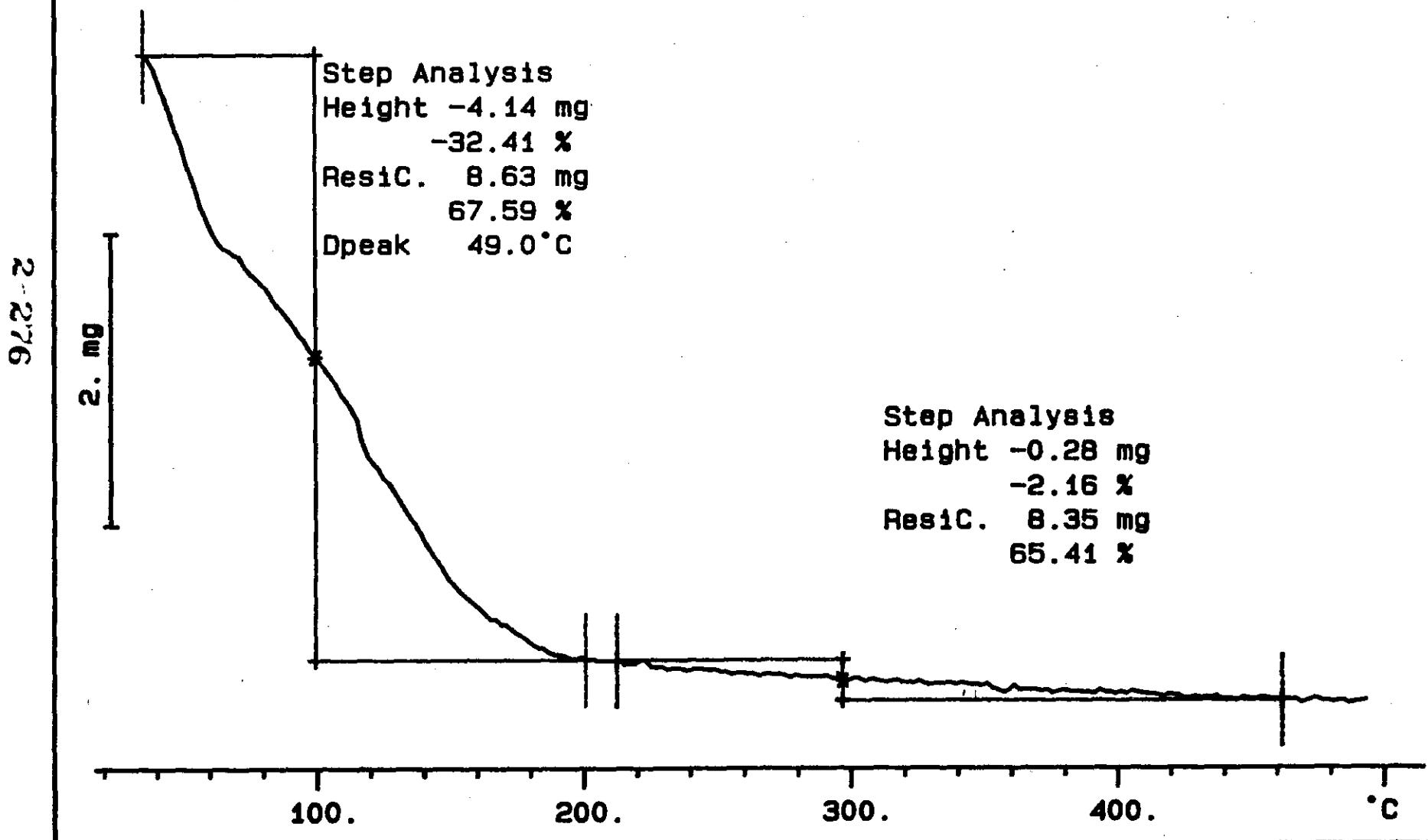
S96T002131 N2

12.766 mg

Rate: 10.0 °C/min

File: 00076.001 TG METTLER 01-May-86

Ident: 0.0 222-S Laboratory



S96T002131DUP N2

41.488 mg

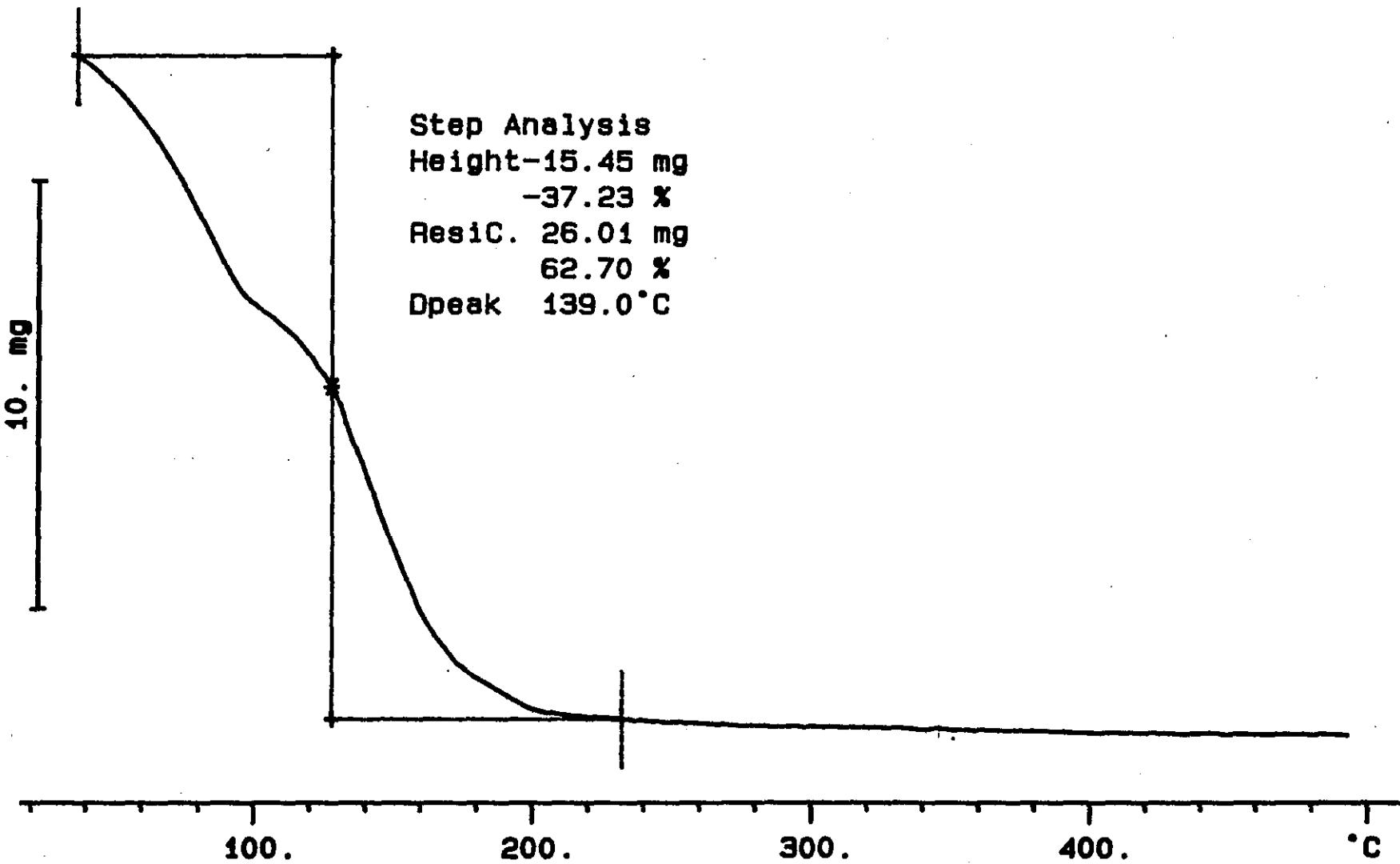
Rate: 10.0 °C/min

File: 00077.001 TG METTLER 02-May-96

Ident: 0.0 222-S Laboratory

Step Analysis
Height-15.45 mg
-37.23 %
ResiC. 26.01 mg
62.70 %
Dpeak 139.0 °C

2-277



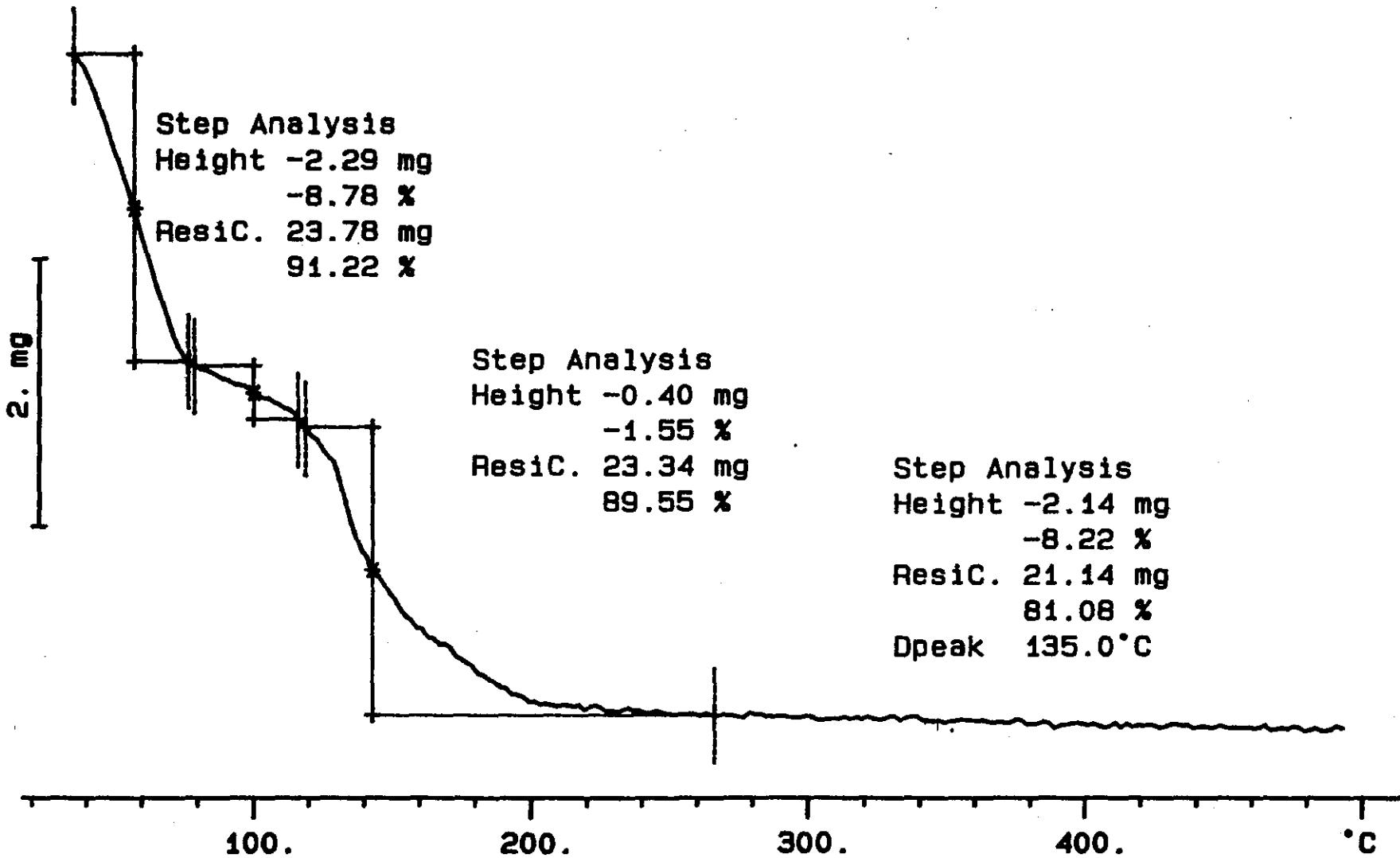
S96T002132 N2

26.069 mg

Rate: 10.0 °C/min

File: 00078.001 TG METTLER 02-May-96

Ident: 0.0 222-S Laboratory



S96T002132 DUP N2

42.491 mg

Rate: 10.0 °C/min

File: 00079.001 TG METTLER 02-May-96

Ident: 0.0 222-8 Laboratory

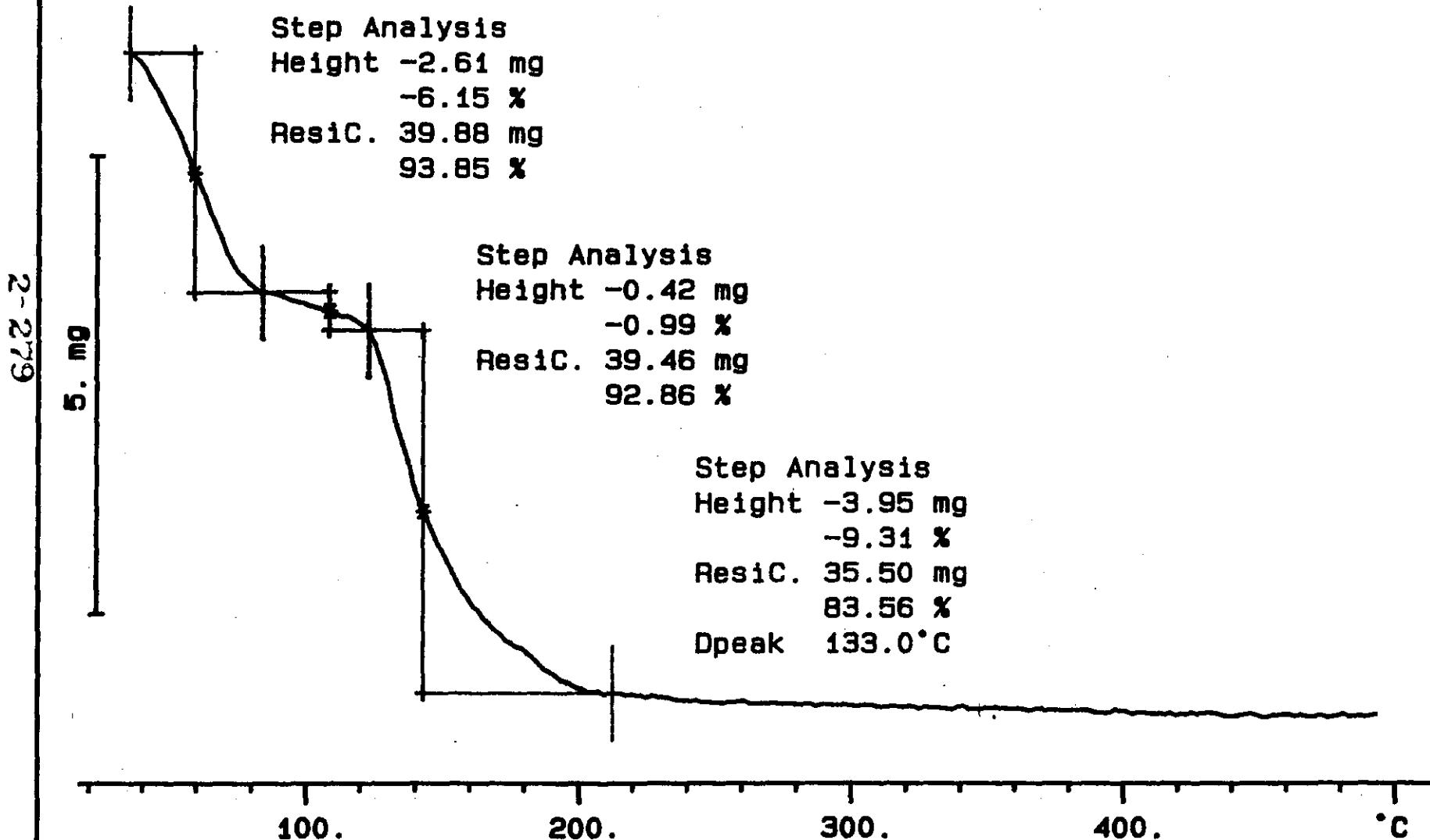
Step Analysis

Height -2.61 mg

-6.15 %

ResiC. 39.88 mg

93.85 %



LABCORE Data Entry Template for Worklist#

8224

Analyst: JDS Instrument: TGA0 3 Book # 82N8AMethod: LA-514-114 Rev/Mod C-1

Worklist Comment: U-107. Run under nitrogen. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	SOLID	<u>59.2</u>	<u>58.5*</u>	<u>N/A</u>	%
96000422	U-107	2 SAMPLE	S96T001874	0	TGA-03	SOLID	<u>N/A</u>	<u>0.73</u>		%
96000422	U-107	3 DUP	S96T001874	0	TGA-03	SOLID	<u>0.73</u>	<u>0.92</u>	<u>N/A</u>	%

Final page for worklist # 8224See Attached for Signatures.Analyst Signature Day Hana Date 5-8-96Day Hana 5-8-96

Verified by Hanan 56-96

Sample showed quite a bit of noise and drift, Due to the low level of moisture in it.

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist#**8224**

Analyst:

JDS

Instrument: TGA0

Book # 82 NFA

Method: LA-560-112 Rev/Mod

Worklist Comment: U-107. Run under nitrogen. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID		N/A	%
96000422	U-107	2 SAMPLE	S96T001874	0	TGA-01	SOLID	N/A		%
96000422	U-107	3 DUP	S96T001874	0	TGA-01	SOLID		N/A	%

Final page for worklist #**8224**Tek S

5-1-96

Analyst Signature

Date

Analyst Signature

Date

Other instrument was used.

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

2-281

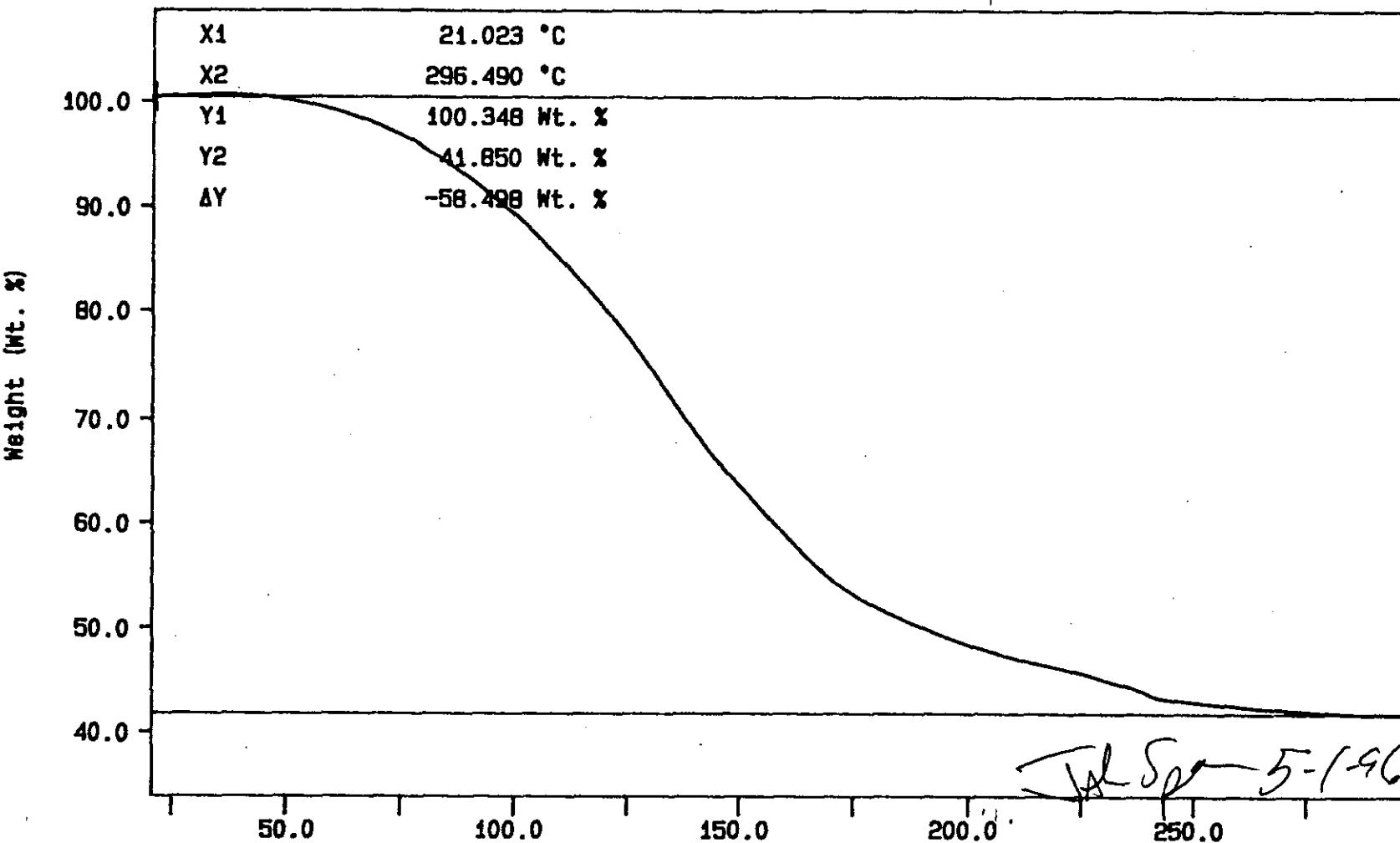
Curve 1: TGA

File info: TER050101 Wed May 1 08:59:10 1996

Sample Weight: 22.801 mg

TGA STD 82NB-A

2-282



N2 10C/MIN
TEMP1: 35.0 C TEMP2: 300.0 C TIME1: 0.0 min RATE1: 10.0 C/min

Temperature (°C)

PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Wed May 1 22:02:18 1996

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2-282 TO 2-284

WHC-SD-WM-DP-184, REV. /

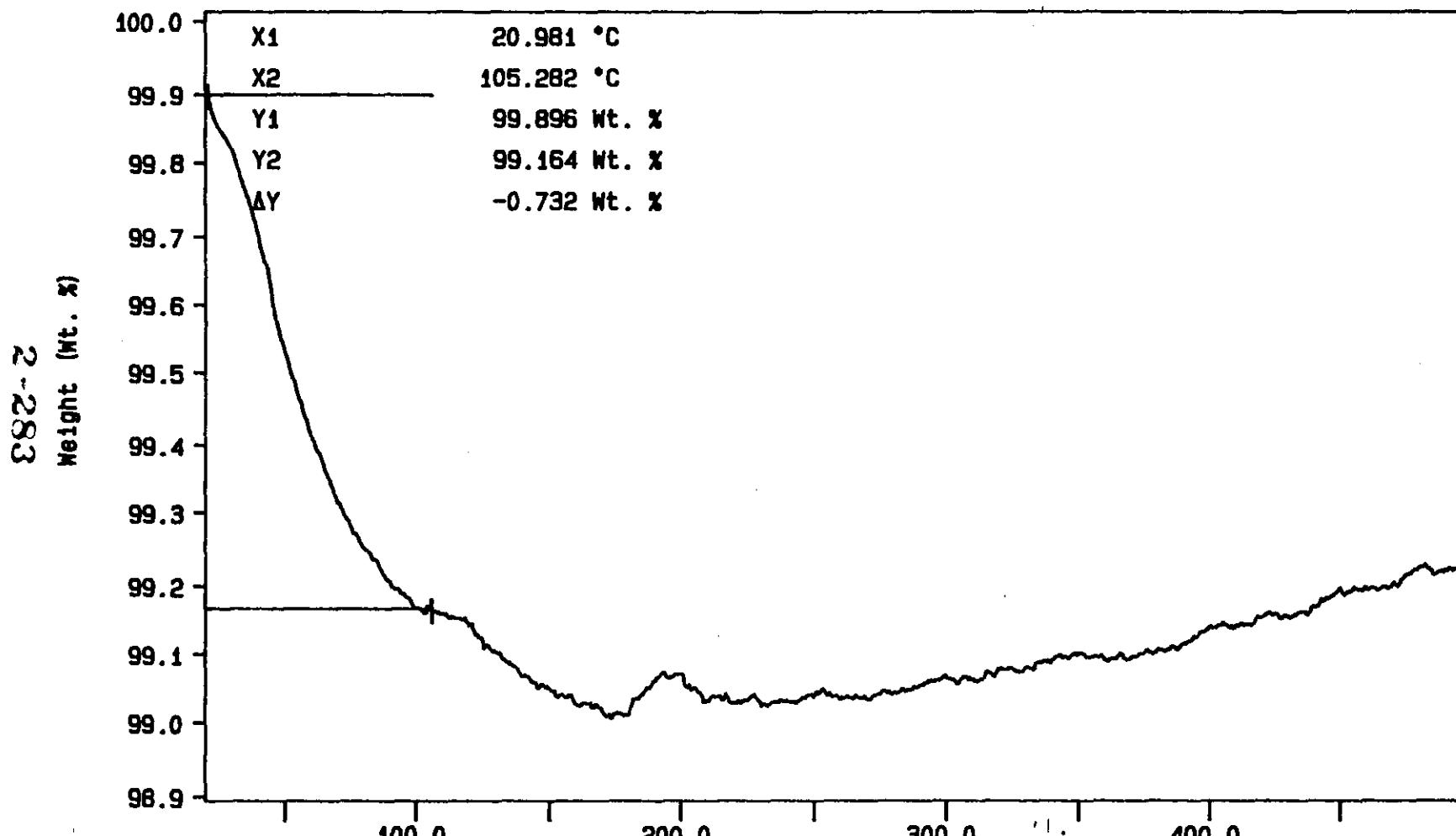
Curve 1: TGA

File info: SAM050108 Wed May 1 23:09:25 1996

Sample Weight: 23.471 mg

S96T000033 1874 SAM

5/3/96
BDY



10C/MIN N2

TEMP1: 25.0 °C TIME1: 0.0 min RATE1: 10.0 °C/min

TEMP2: 500.0 °C

JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Fri May 3 09:25:51 1996

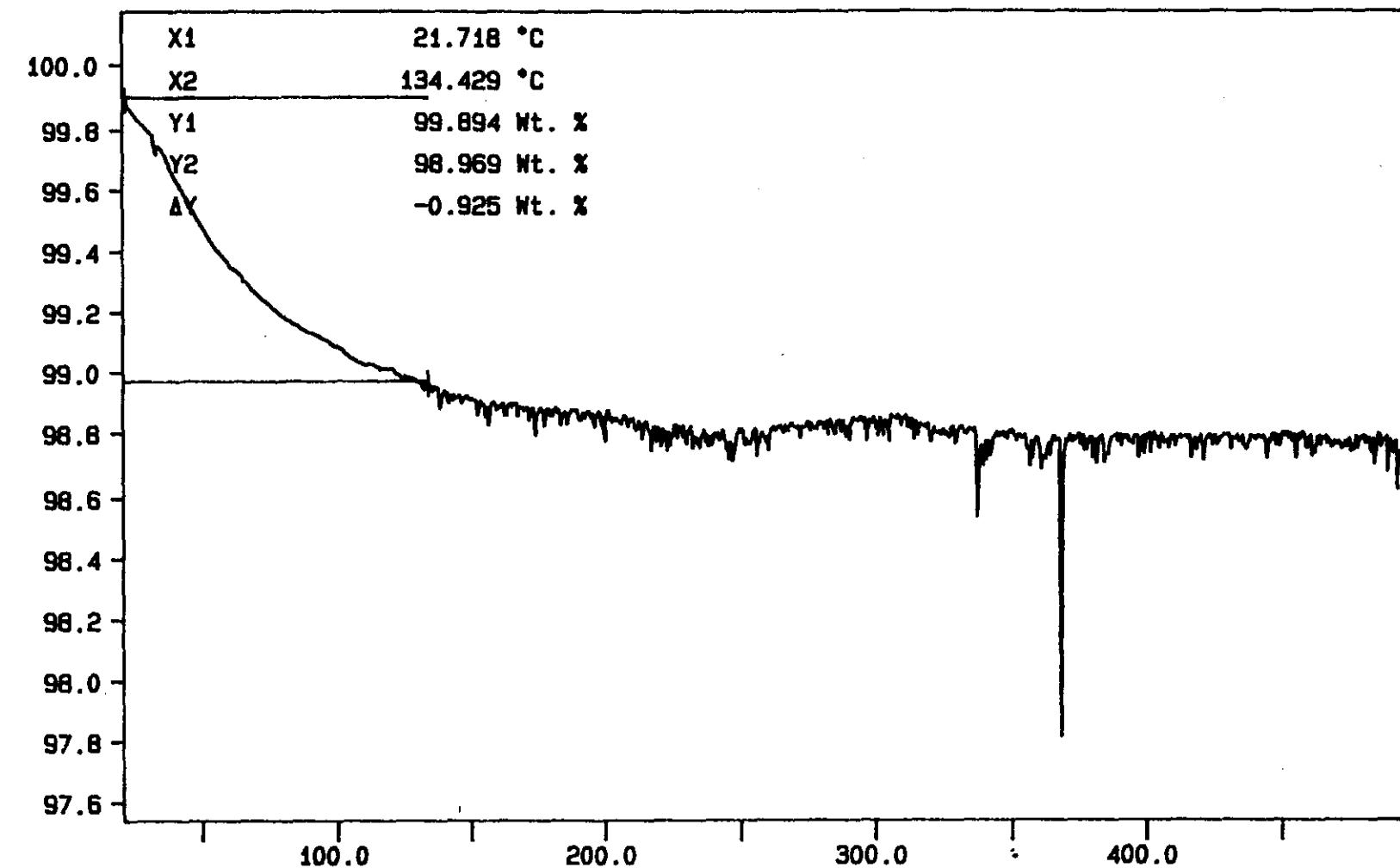
Curve 1: TGA

File info: SAM050201 Thu May 2 01:55:58 1996

Sample Weight: 27.505 mg

S96T001874DUP

WHC-SD-WM-DP-184, REV. 1



2-284

10C/MIN N2

TEMP1: 26.0 °C TIME1: 0.0 min RATE1: 10.0 °C/min

TEMP2: 500.0 °C

Temperature (°C)

JD SPELLMAN

PERKIN-ELMER

7 Series Thermal Analysis System

Fri May 3 09:31:00 1996

LABCORE Data Entry Template for Worklist#

8226

Analyst: B. McCown Instrument: TGA0 1 Book # 8226AMethod: LA-560-112 Rev/Mod B-1

Worklist Comment: U-107. Run under nitrogen. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	59.2	59.26	N/A %
96000126	U-107	2 SAMPLE	S96T002034 0		TGA-01	LIQUID	N/A	98.17	
96000126	U-107	3 DUP	S96T002034 0		TGA-01	LIQUID	98.17	98.14	N/A

Final page for worklist #

8226

B. McCown
Analyst Signature5/2/96 am
5/4/96
DateDave Hammett
Analyst Signature5-4-96
Date

Verified by HAnastri 5-6-96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

TGA STD 82N8A

25.067 mg

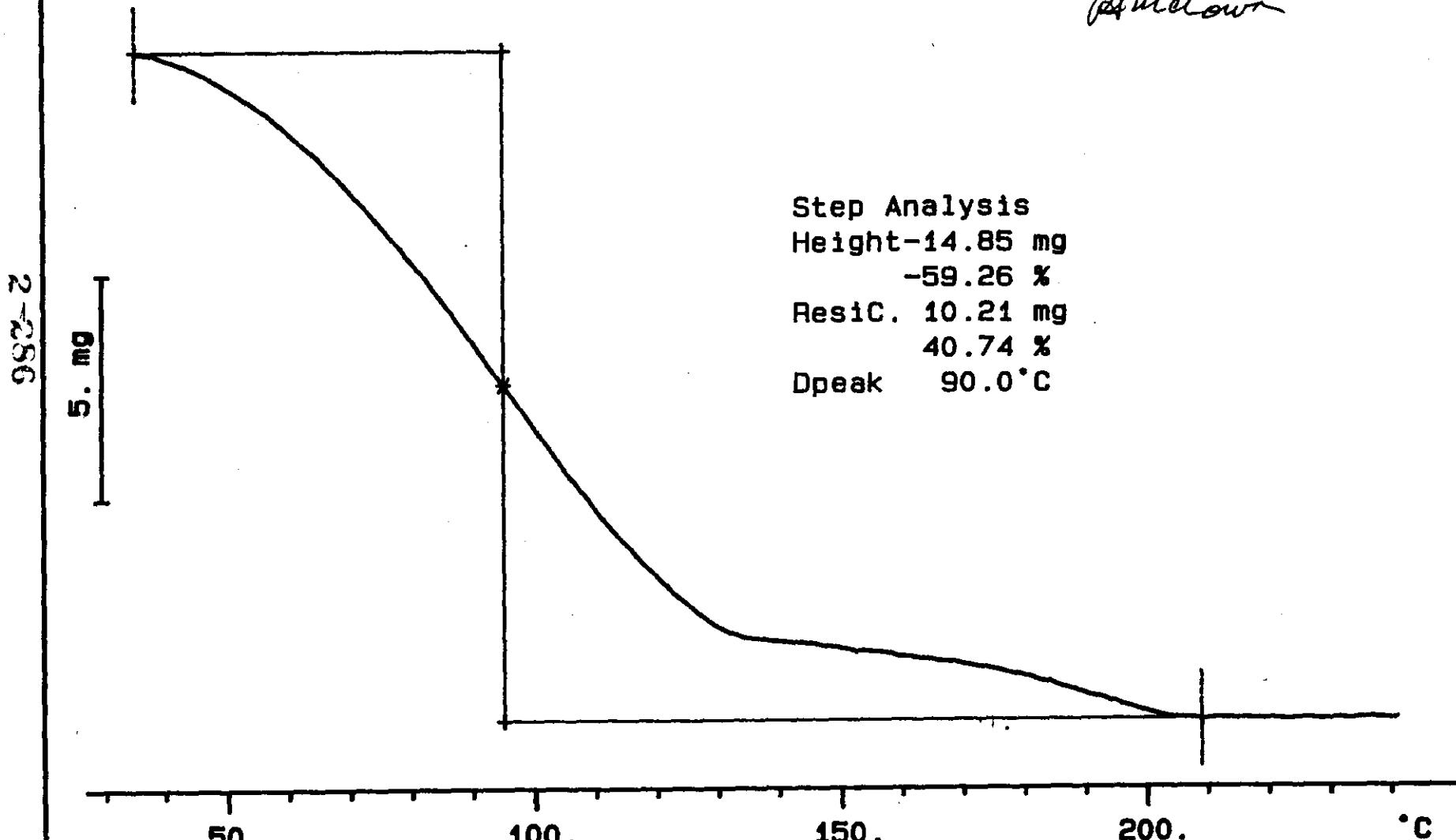
Rate: 10.0 °C/min

File: 00080.001 TG METTLER 02-May-96

Ident: 0.0

222-S Laboratory

P. McCown



WHC-SD-WM-DR-184, REV. 1

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2-26 TO 2-28

S96T002034 N2

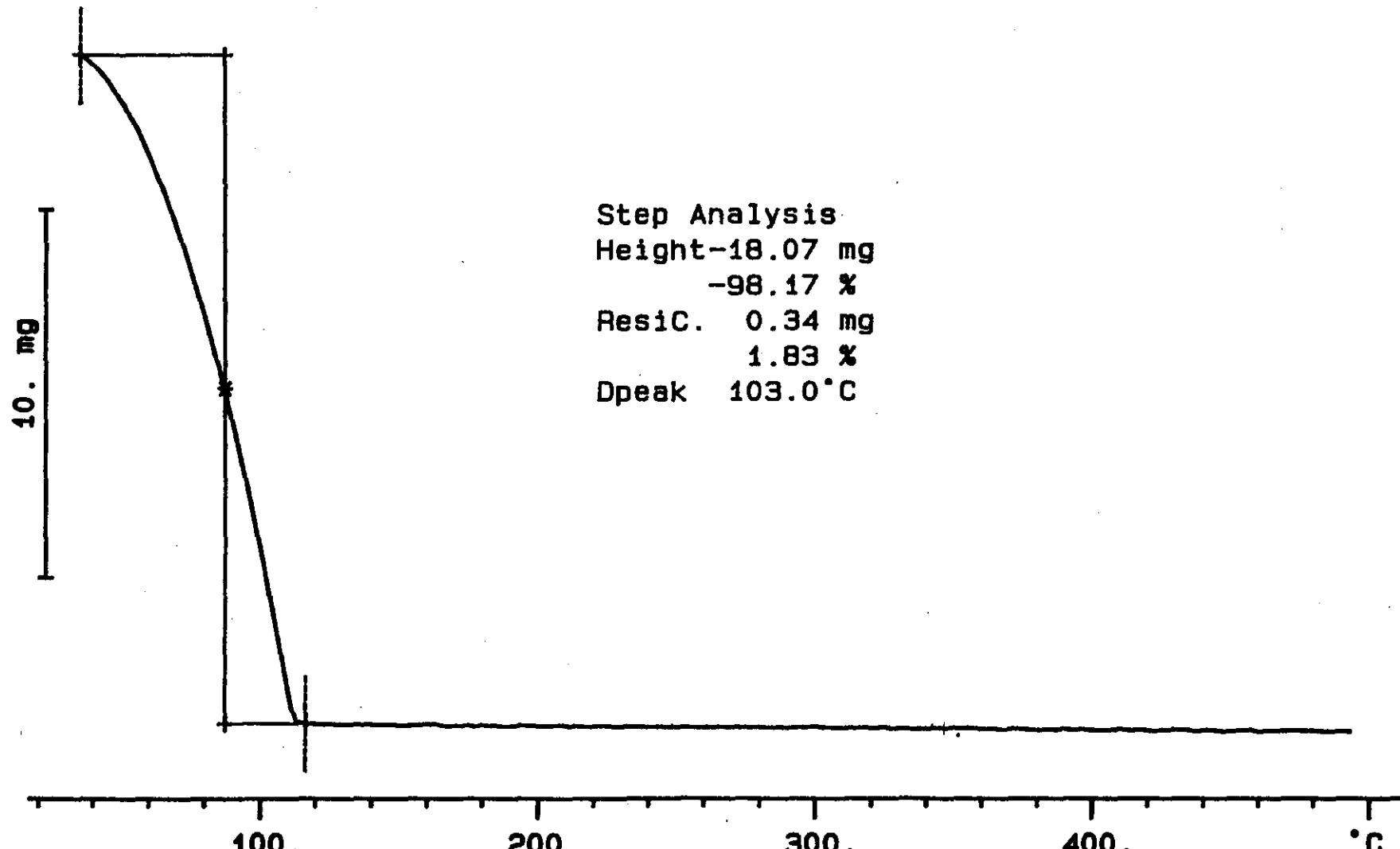
18.405 mg

Rate: 10.0 °C/min

File: 00081.001 TG METTLER 02-May-96

Ident: 0.0 222-S Laboratory

2-287



S96T002034 DUP N2

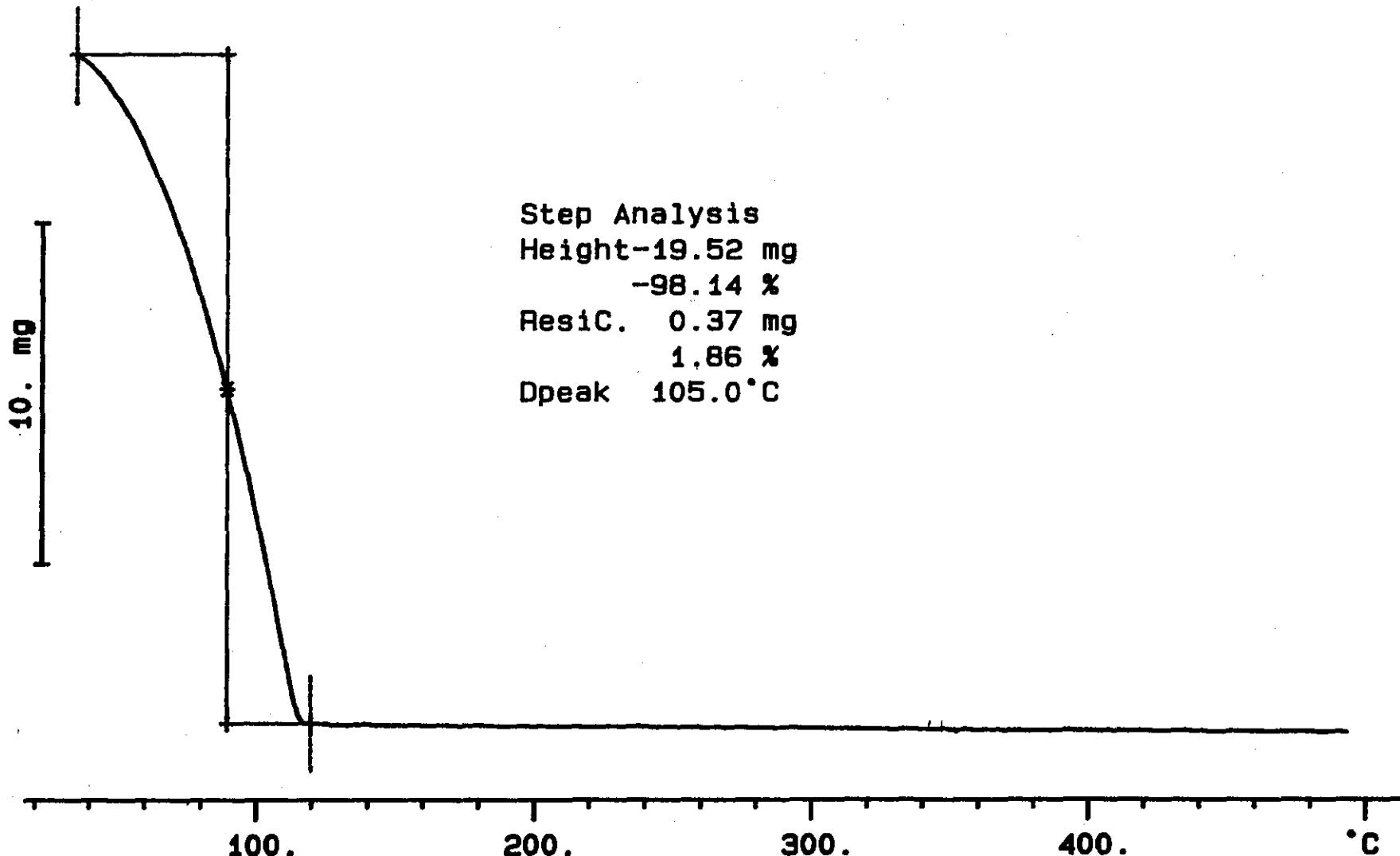
19.893 mg

Rate: 10.0 °C/min

File: 00082.001 TG METTLER 02-May-96

Ident: 0.0 222-S Laboratory

2-288



LABCORE Data Entry Template for Worklist#

8434

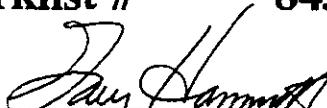
Analyst: KRM Instrument: TGA0 1 Book # 82N8-AMethod: LA-560-112 Rev/Mod B-1

Worklist Comment: U-107 TGA RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	59.2	58.92	N/A %
96000422	U-107	2 SAMPLE	S96T002140 0		TGA-01	LIQUID	N/A	52.73	
96000422	U-107	3 DUP	S96T002140 0		TGA-01	LIQUID	52.73	52.28	N/A %
96000422	U-107	4 SAMPLE	S96T002141 0		TGA-01	LIQUID	N/A	47.03	
96000422	U-107	5 DUP	S96T002141 0		TGA-01	LIQUID	47.03	47.02	N/A %

Final page for worklist # 8434


5-8-96
 Analyst Signature Date


5-13-96
 Analyst Signature Date

Validated by Hanastis 5-14-96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2290 TO 2294

TGA STD 82N8-A

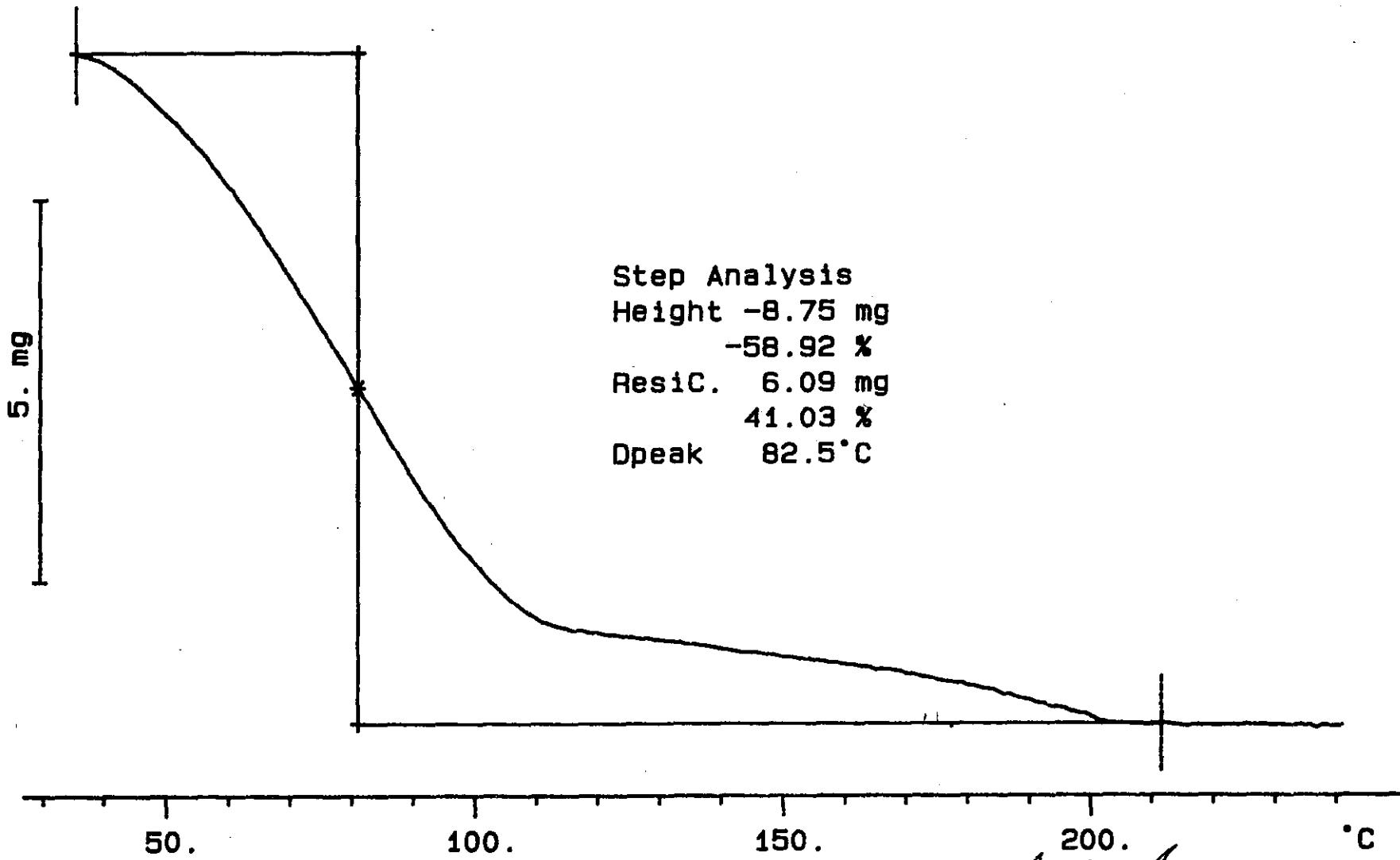
14.853 mg

Rate: 10.0 °C/min

File: 00051.001 TG METTLER 08-May-96

Ident: 0.0 222-S Laboratory

2-2290



WHC-SD-WM-DP-134, REV. 1

[Signature] 5-8-96

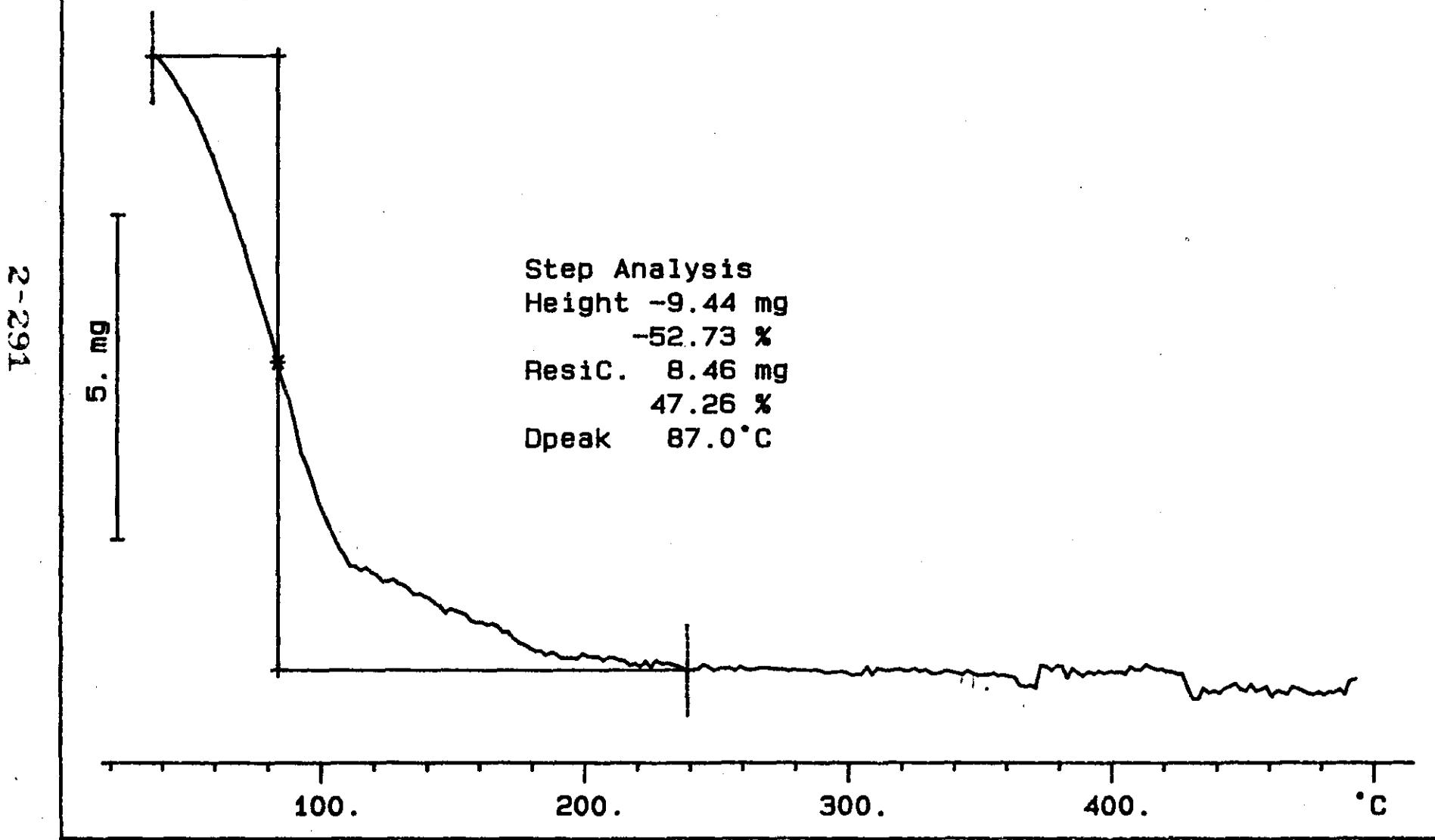
S96T002140 N2

17.892 mg

Rate: 10.0 °C/min

File: 00053.001 TG METTLER 08-May-96

Ident: 0.0 222-S Laboratory



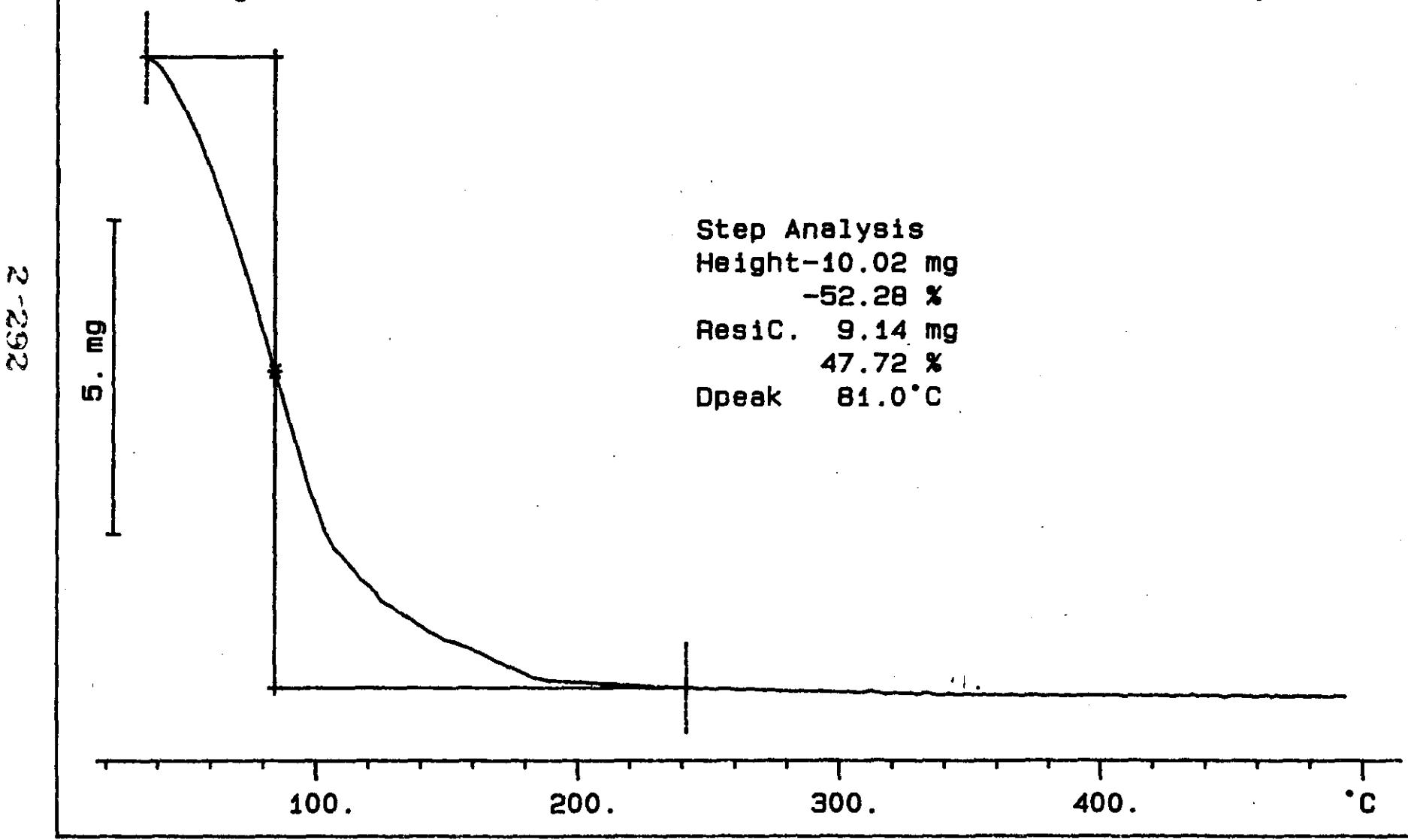
S96T002140 DUP N2

19.159 mg

Rate: 10.0 °C/min

File: 00055:001 TG METTLER 08-May-86

Ident: 0.0 222-S Laboratory



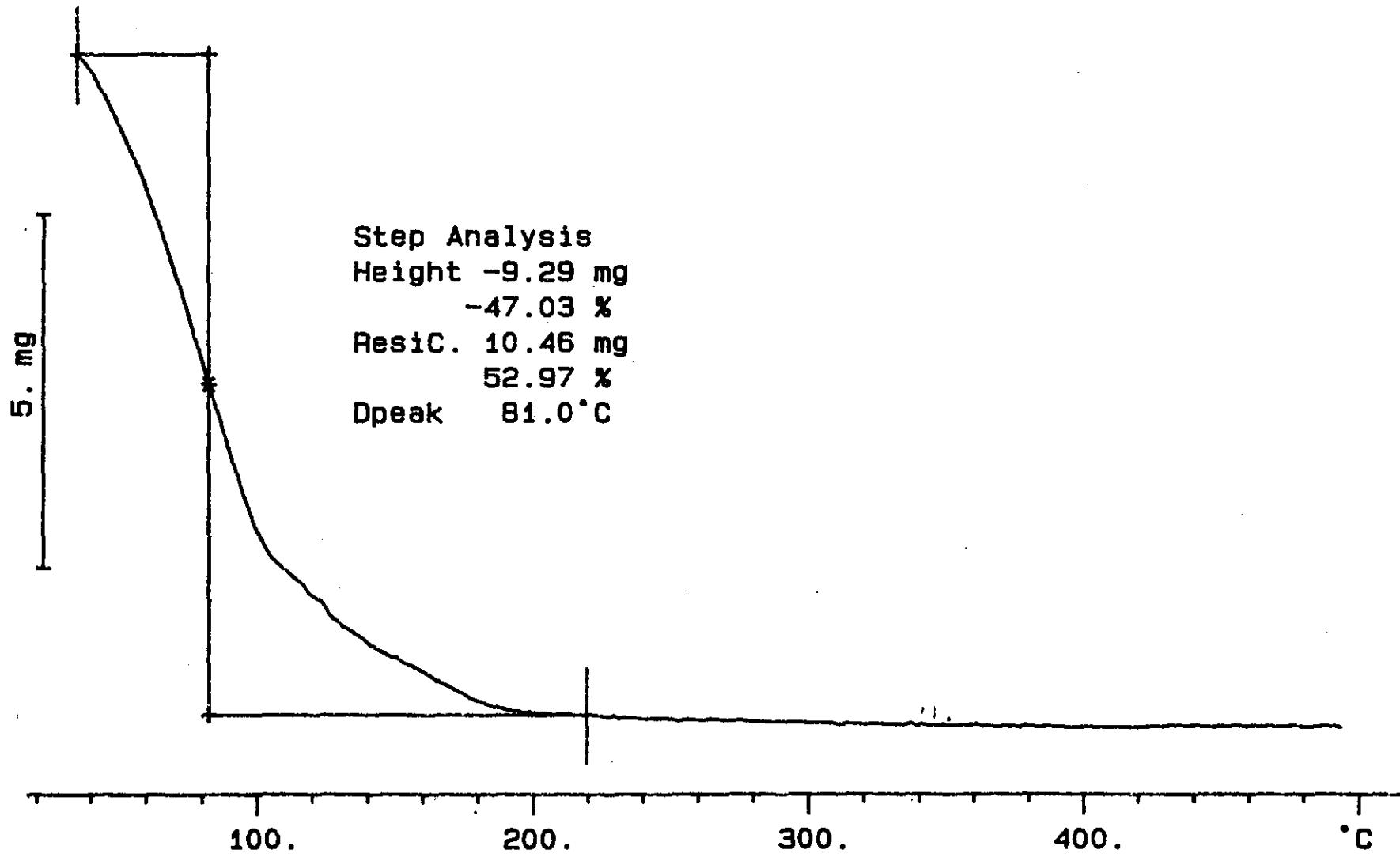
2-293

S96T002141 N2

19.754 mg

Rate: 10.0 °C/min

File: 00057.001 TG METTLER 08-May-96
Ident: 0.0 222-S Laboratory



S96T002141 DUP N2

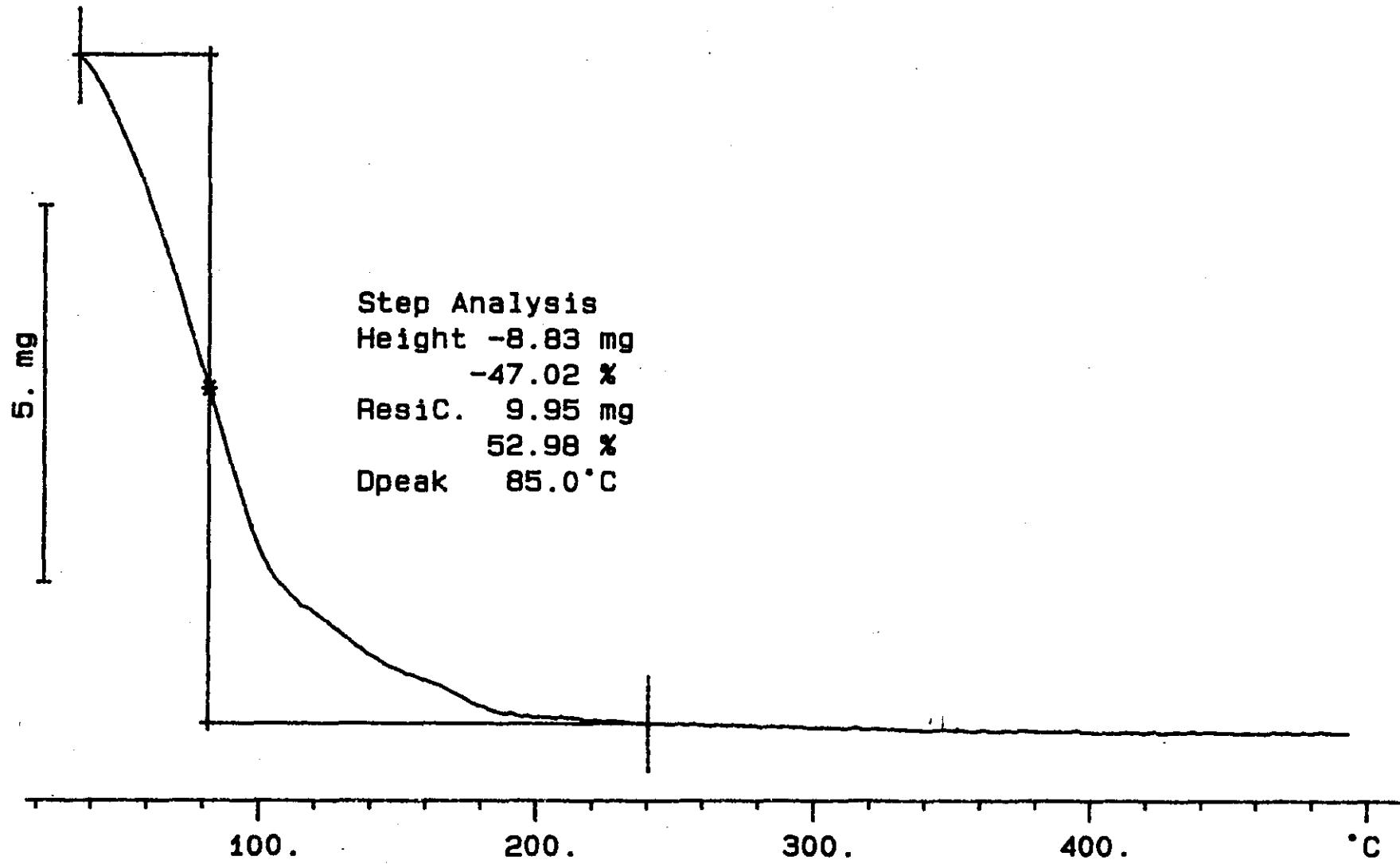
18.777 mg

Rate: 10.0 °C/min

File: 00059.001 TG METTLER 09-May-96

Ident: 0.0 222-S Laboratory

2 - 294



WHC-SD-WM-DP-184, REV. 1

LABCORE Data Entry Template for Worklist#

8435

Analyst: KRM Instrument: TGA0 Book # 82N8AMethod: LA-560-112 Rev/Mod B-1

Worklist Comment: U-107 TGA RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		TGA-01	Liquid	59.2	59.13*	N/A	%
96000422	U-107	2 SAMPLE	S96T002142 0	TGA-01	Liquid	N/A	52.45		%
96000422	U-107	3 DUP	S96T002142 0	TGA-01	Liquid	52.45	52.18	N/A	%

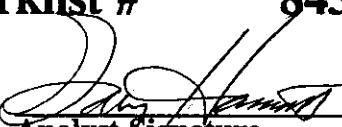
Final page for worklist #

8435

5-7-96

 Analyst Signature

Date

 Analyst Signature

Date

Validated by H Anastas 5-10-96

5-9-96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2796 TO 2798

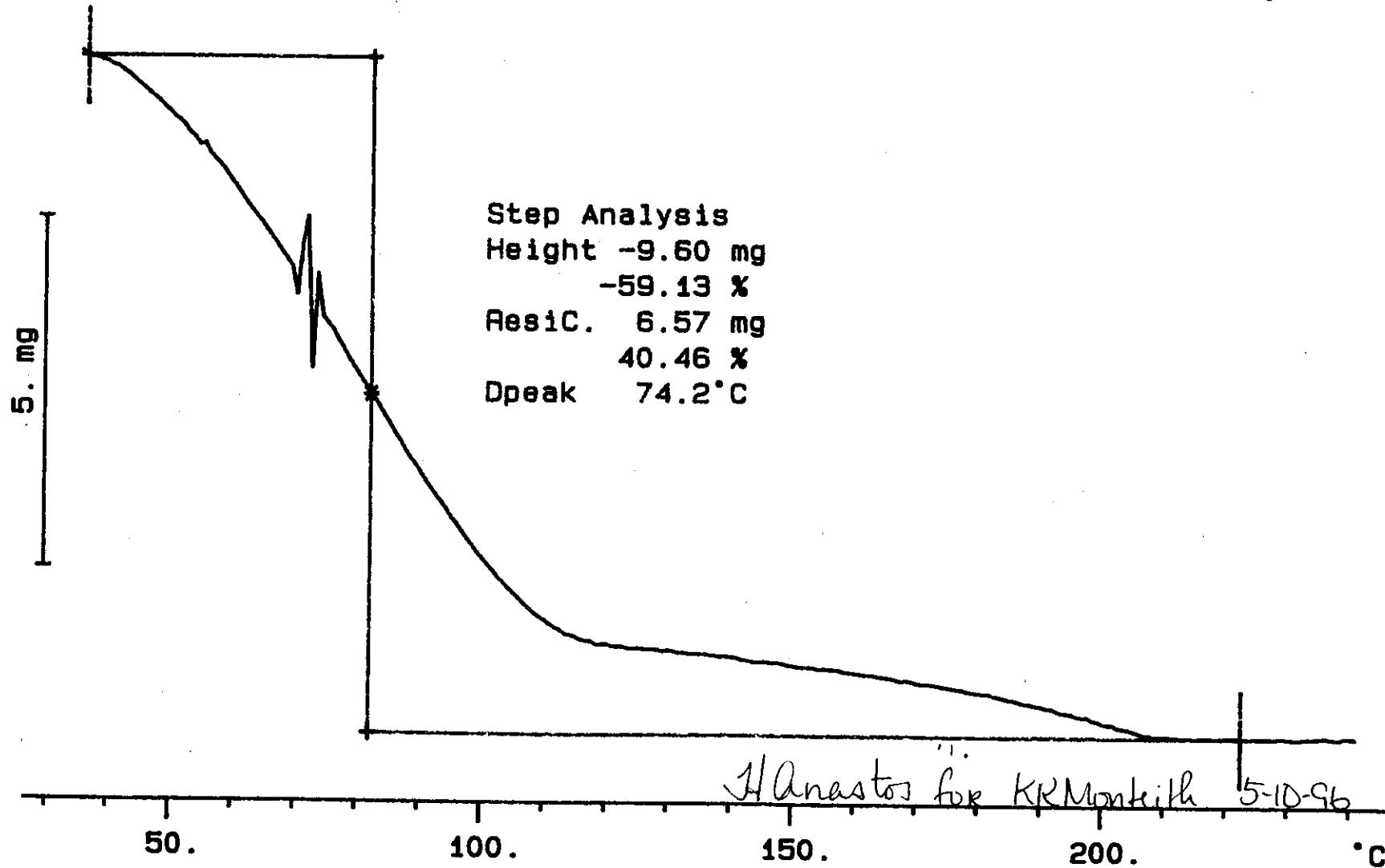
TGA STD 82NB-A

16.236 mg

Rate: 10.0 °C/min

File: 00035.001 TG METTLER 07-May-96
Ident: 0.0 222-S Laboratory

2796



WHC-SD-WM-C-100-100-100

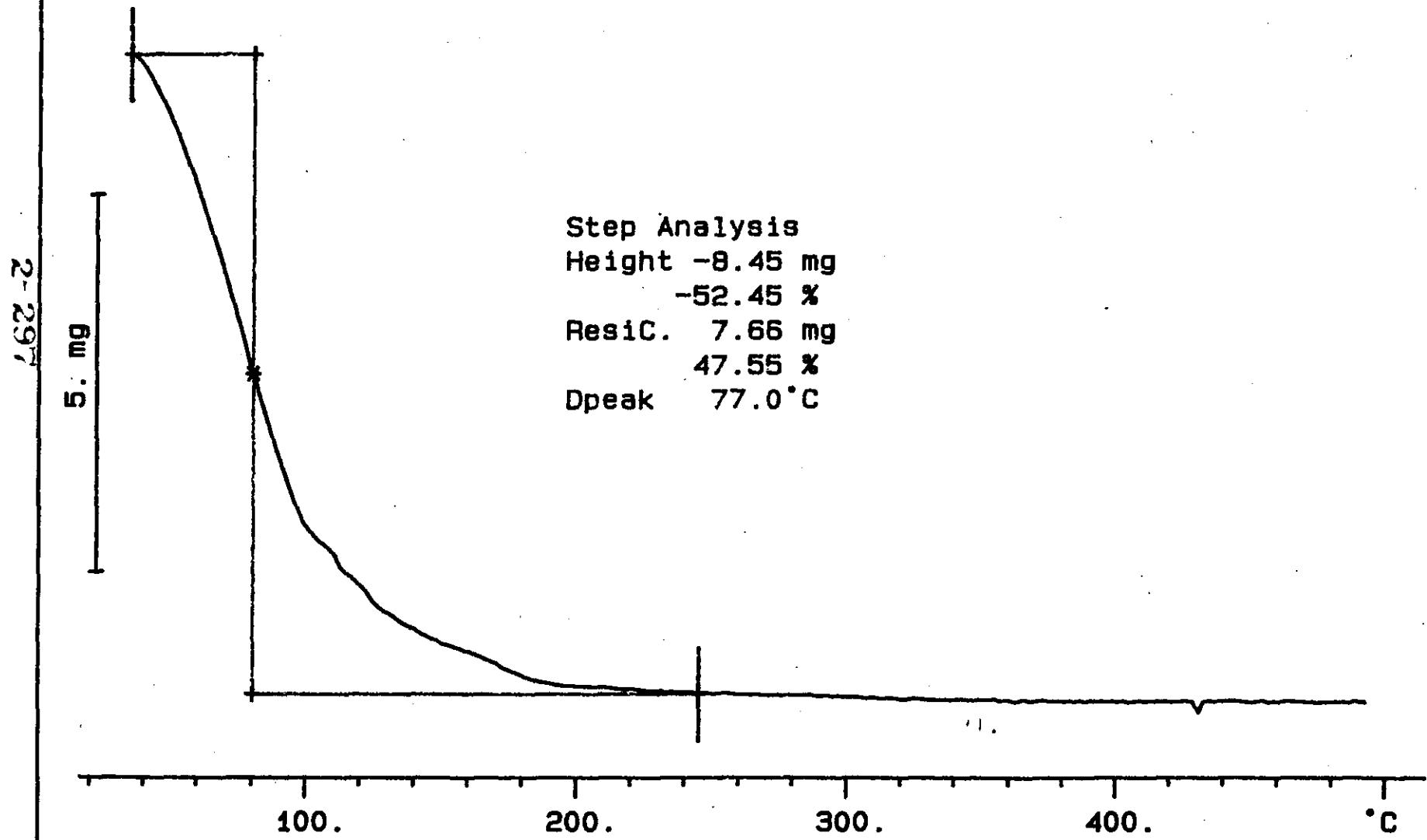
S96T002142 N2

16.105 mg

Rate: 10.0 °C/min

File: 00044.001 TG METTLER 08-May-96

Ident: 0.0 222-S Laboratory



S96T002142 DUP N2

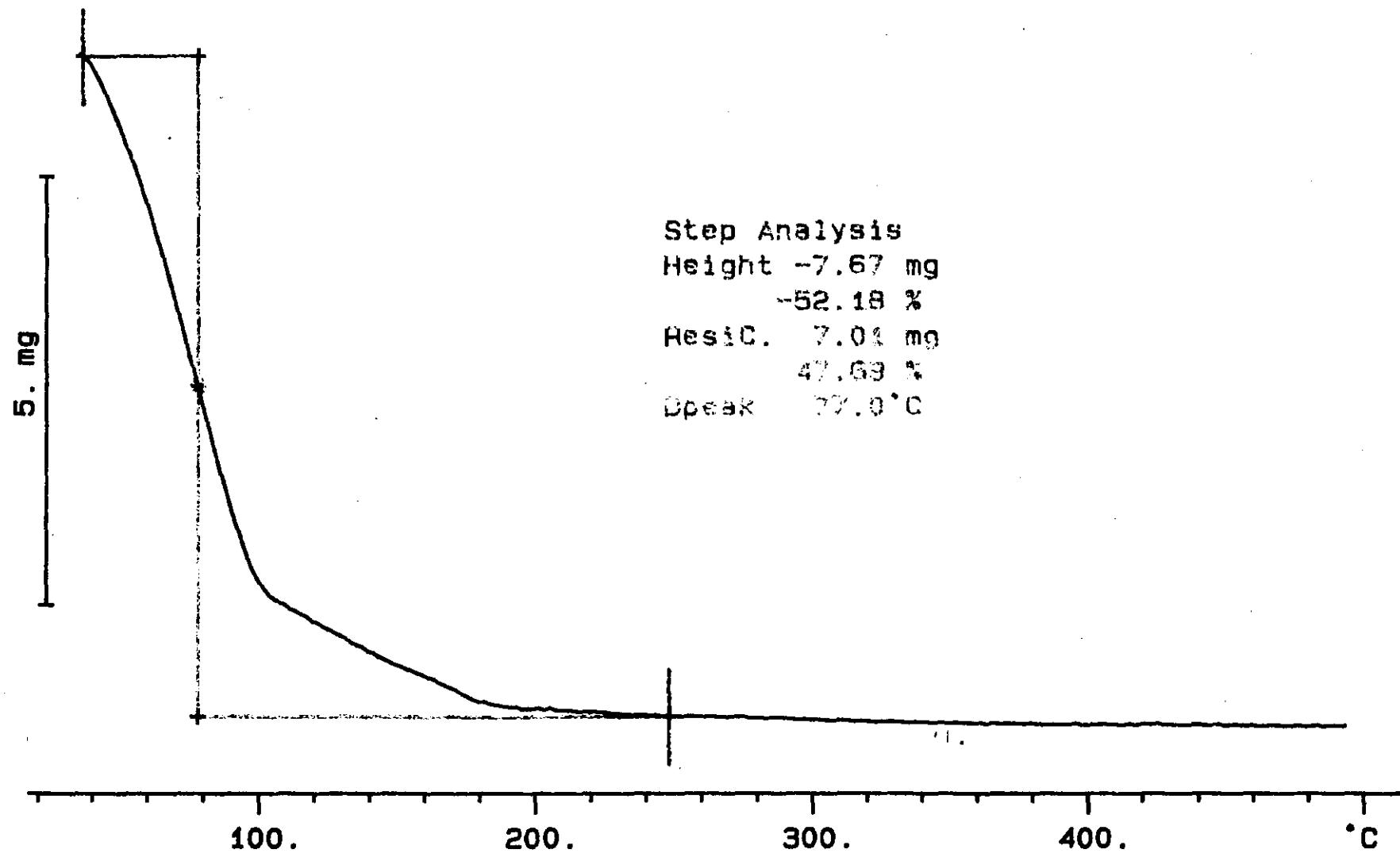
14.697 mg

Rate: 10.0 °C/min

File: 00046.001 TG METTLER 08-May-96

Ident: 0.0 222-S Laboratory

2-298



LABCORE Data Entry Template for Worklist#

8436

Analyst: KRM Instrument: TGA0 1 Book # 82N8AMethod: LA-560-112 Rev/Mod B-1

Worklist Comment: U-107 TGA RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.2</u>	<u>59.13*</u>	N/A	%
96000422	U-107	2 SAMPLE	S96T002133	0	TGA-01	SOLID	<u>N/A</u>	<u>16.38</u>		%
		3 STD			TGA-01	SOLID	<u>59.2</u>	<u>58.92*</u>	N/A	%
96000422	U-107	4 DUP	S96T002133	0	TGA-01	SOLID	<u>16.38</u>	<u>15.46</u>	N/A	%

Final page for worklist #

8436

See attached for signatures

Analyst Signature Date 5-13-96

Analyst Signature

Date

5-13-96

Validated by Hanastos 5-14-96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist#**8436**Analyst: JRM Instrument: TGA0 Book # 82N8AMethod: LA-560-112 Rev/Mod B-1

Worklist Comment: U-107 TGA RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID		N/A	%
96000422	U-107	2 SAMPLE	S96T002133 0		TGA-01	SOLID	N/A		%
96000422	U-107	3 DUP	S96T002133 0		TGA-01	SOLID		N/A	%

Final page for worklist # 8436

John M. Mateo 5-7-96
 Analyst Signature Date

Analyst Signature Date

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

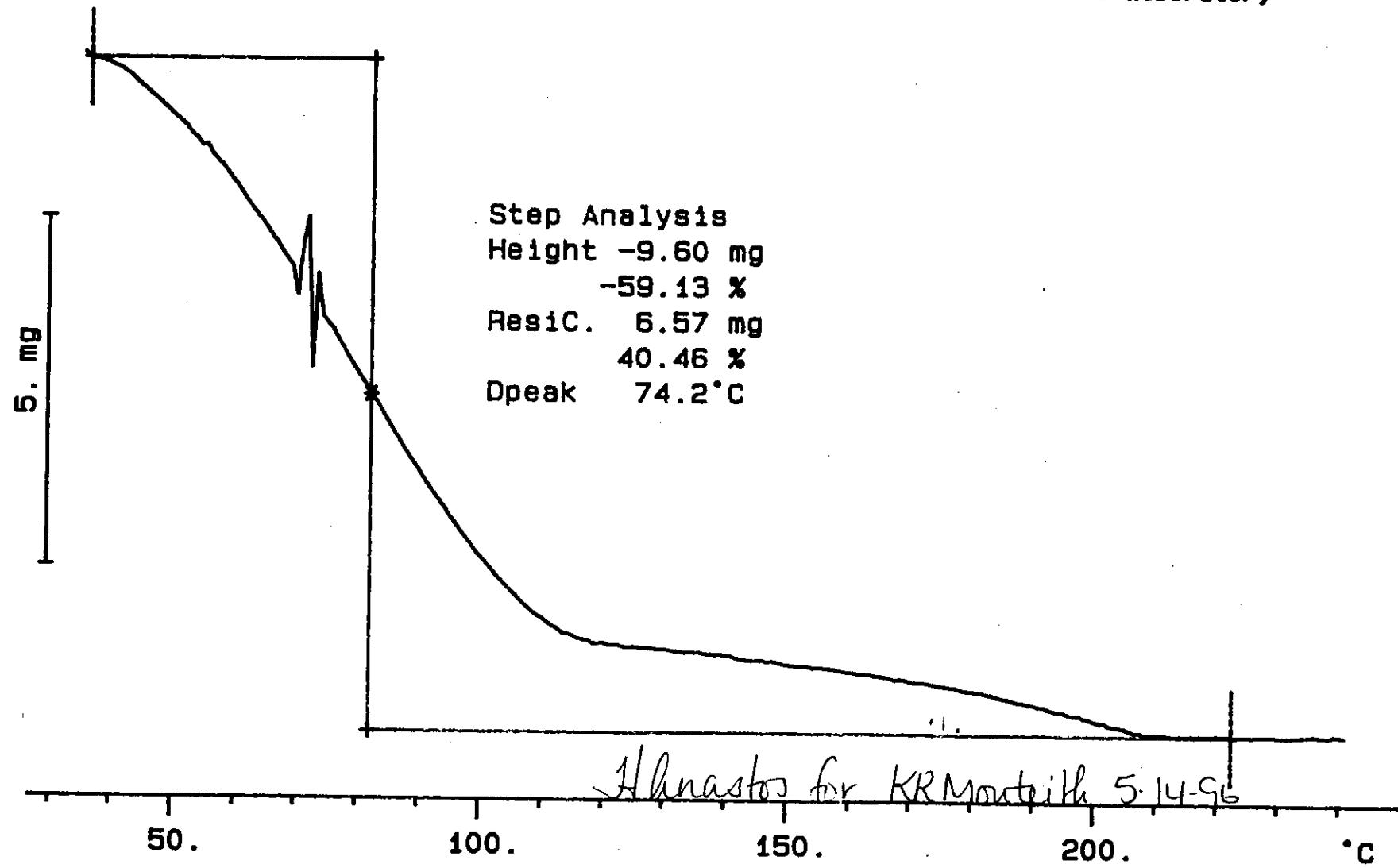
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2301 TO 2304

TGA STD 82N8-A

16.236 mg

Rate: 10.0 °C/min

File: 00035.001 TG METTLER 07-May-96
Ident: 0.0 222-S Laboratory



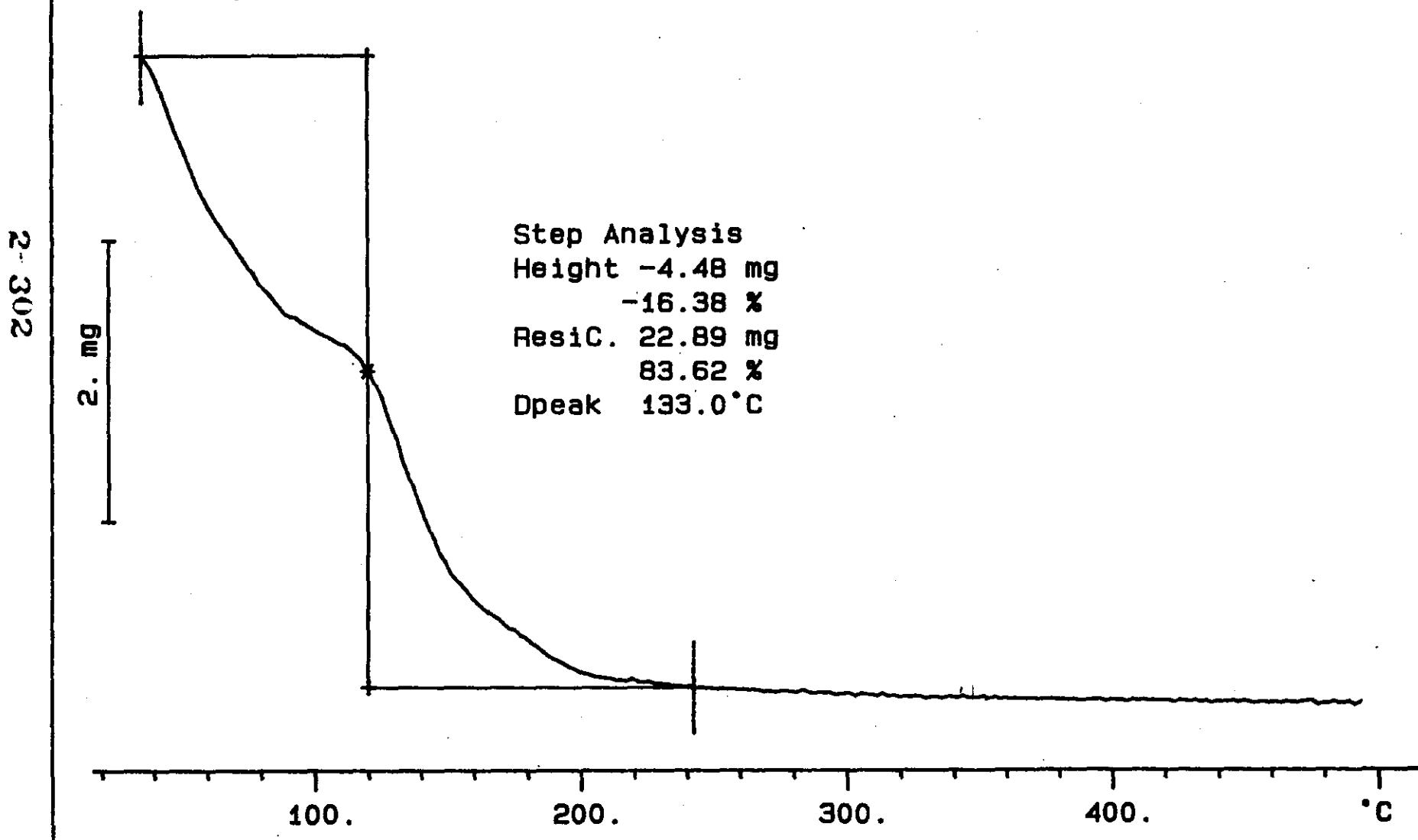
S96T002133 N2

27.370 mg

Rate: 10.0 °C/min

File: 00048.001 TG METTLER 08-May-96

Ident: 0.0 222-S Laboratory



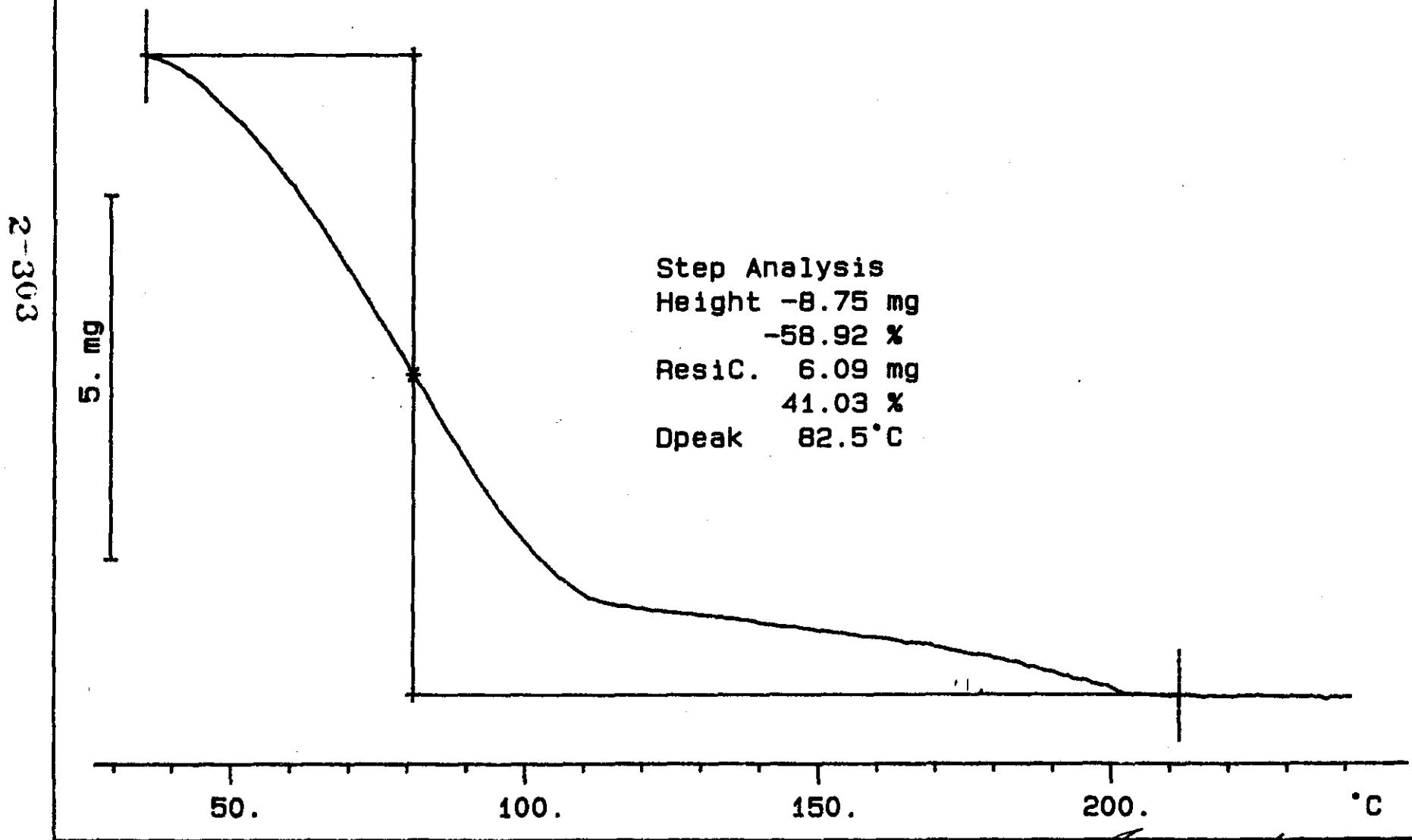
TGA STD 82N8-A

14.853 mg

Rate: 10.0 °C/min

File: 00051:001 TG METTLER 08-May-96

Ident: 0.0 222-S Laboratory



WHC-SD-WM-DP-184, REV. |

[Signature]

5-8-96

S96T002133 DUP N2

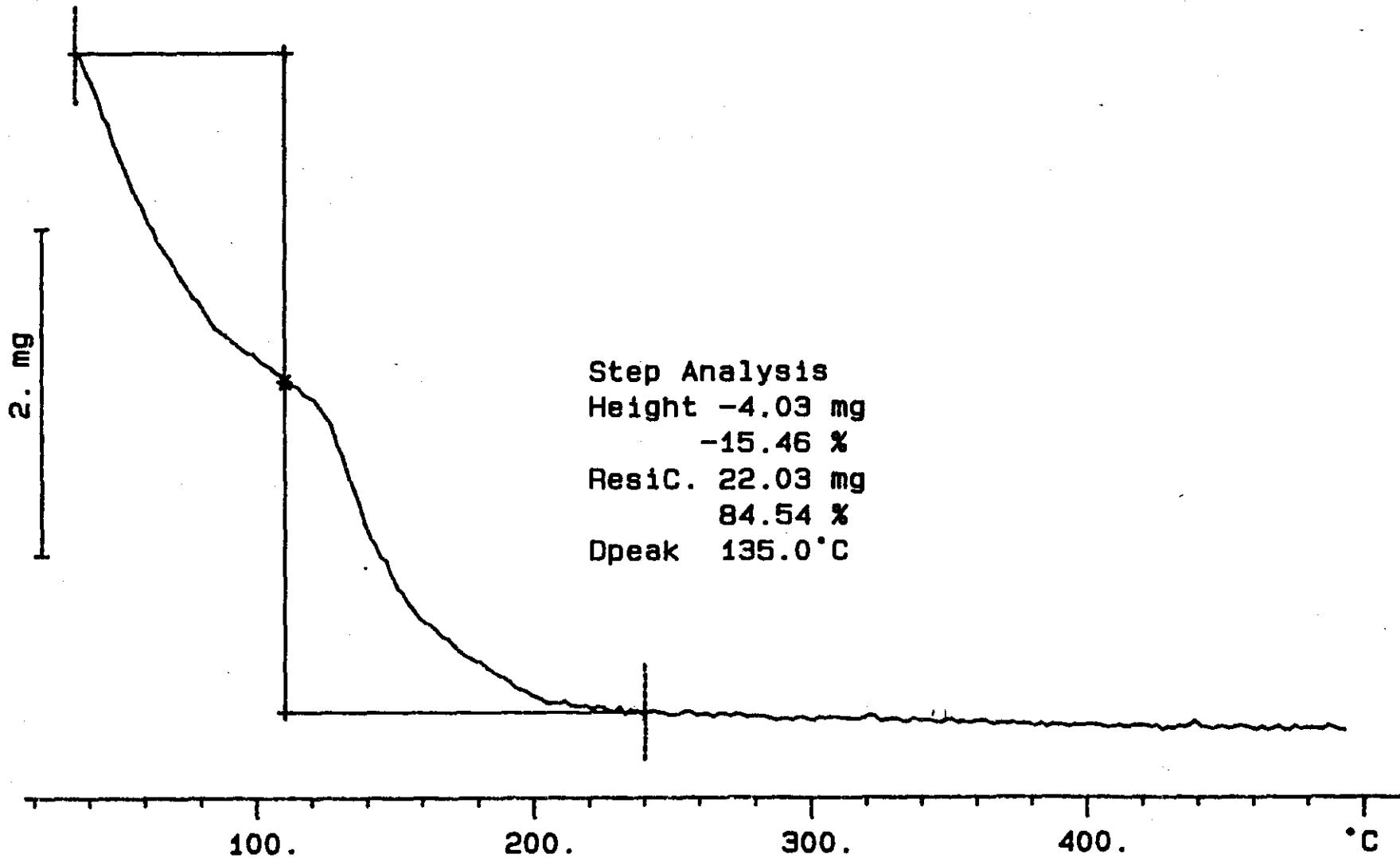
26.063 mg

Rate: 10.0 °C/min

File: 00061:001 TG METTLER 09-May-96

Ident: 0.0 222-S Laboratory

2-304



WHC-SD-WM-DP-184, REV. 1

LABCORE Data Entry Template for Worklist#

8947

Analyst: RJMcClown Instrument: TGA0 Book # 82 N 8AMethod: LA-560-112 Rev/Mod B-1

Worklist Comment: U-107 TGA-01 RUN UNDER N2 RTS!

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		TGA-01	LIQUID	59.2	59.37	N/A	%
96000422	U-107	2 SAMPLE	S96T001866 0	TGA-01	LIQUID	N/A	94.44		%
96000422	U-107	3 DUP	S96T001866 0	TGA-01	LIQUID	94.44	93.93	N/A	%

Final page for worklist # 8947

RJMcClown 5/23/96
Analyst Signature DateRJMcClown 5-28-96
Analyst Signature Date

Verified / Validated by
Blandina
Valenzuela
5-31-96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

2-306

TGA STD 82N8A

15.074 mg

Rate: 10.0 °C/min

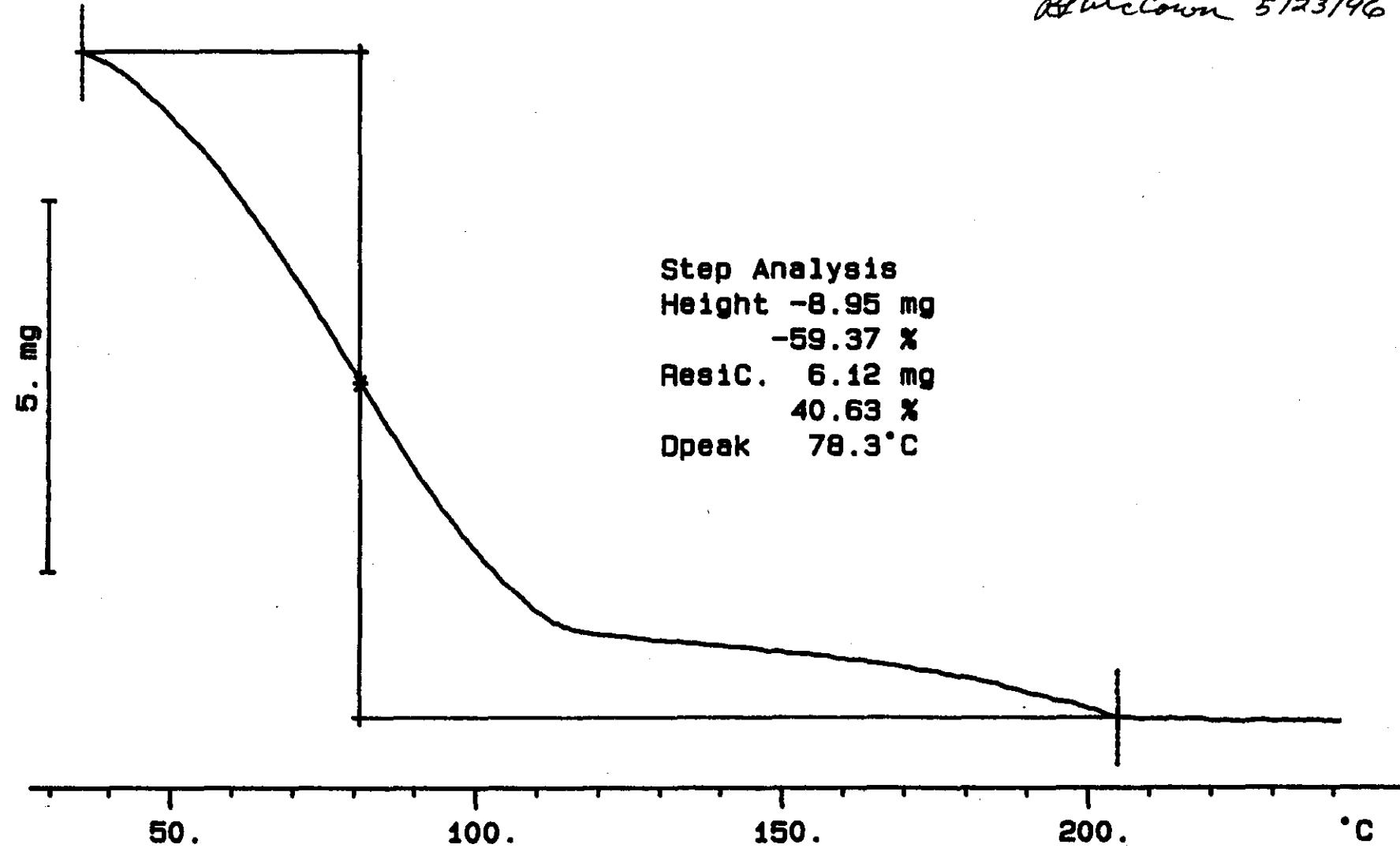
File: 00018.001 TG METTLER 23-May-98

Ident: 0.0

222-S Laboratory

Blueribbon 5/23/98

Step Analysis
Height -8.95 mg
-59.37 %
ResidC. 6.12 mg
40.63 %
Dpeak 78.3 °C



S96T001866 N2

19.699 mg

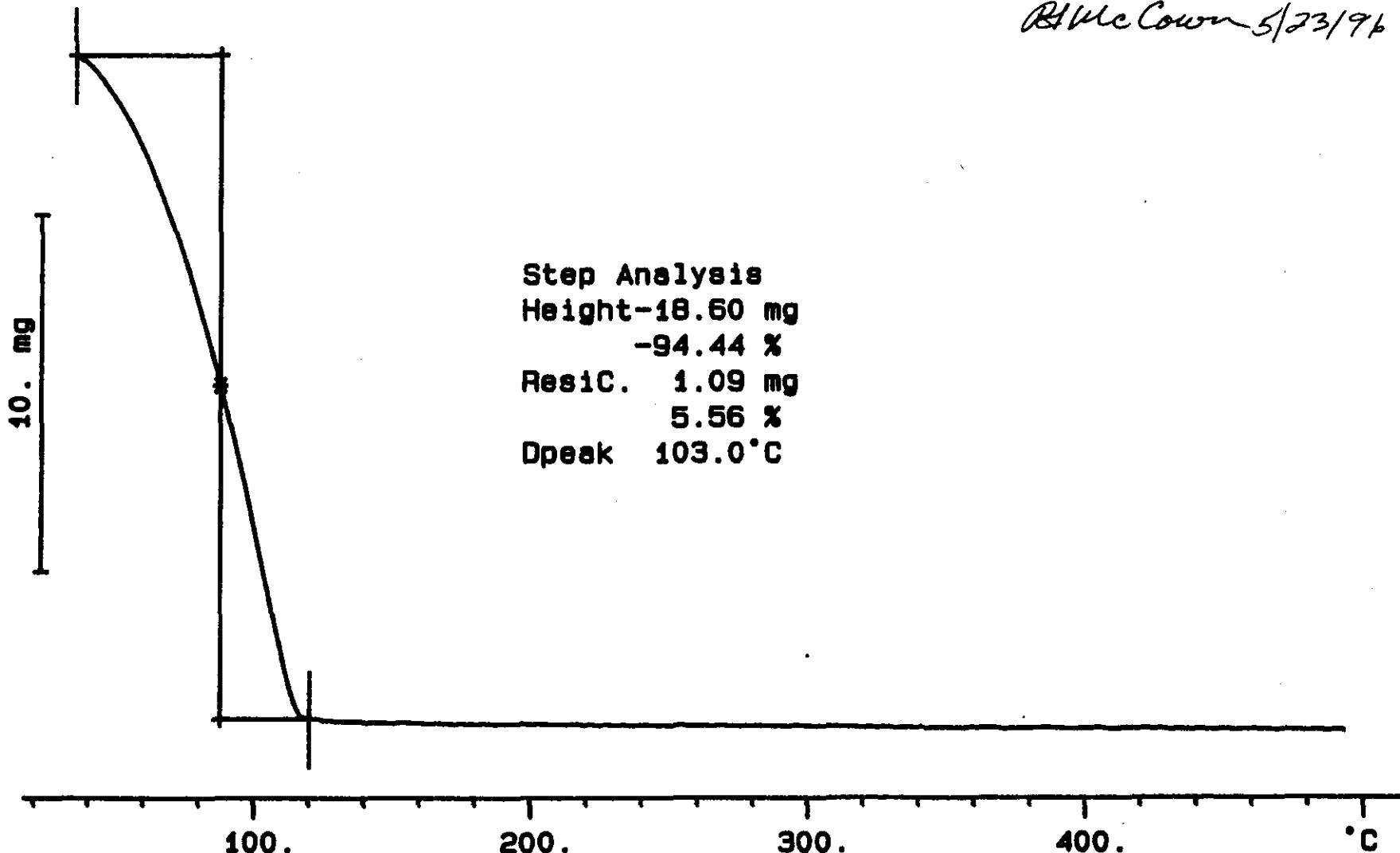
Rate: 10.0 °C/min

File: 00021.001 TG METTLER 23-May-96

Ident: 0.0

222-S Laboratory

RJ McCown 5/23/96



2-3067

WHC-SD-WW-C2-34, 2011

S96T001866 DUP N2

20.661 mg

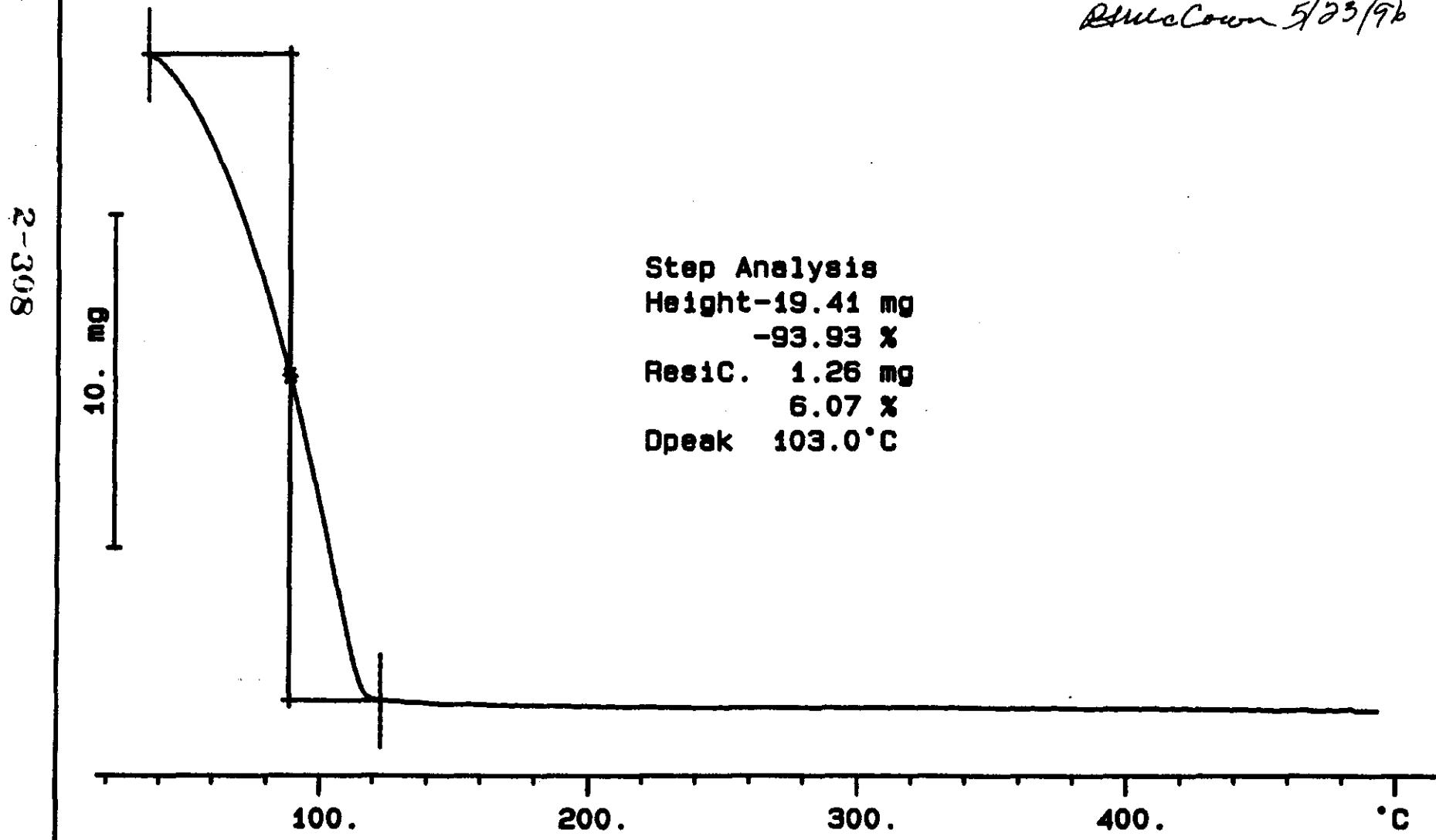
Rate: 10.0 °C/min

File: 00019.001 TG METTLER 23-May-96

Ident: 0.0

222-S Laboratory

R. McCown 5/23/96



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